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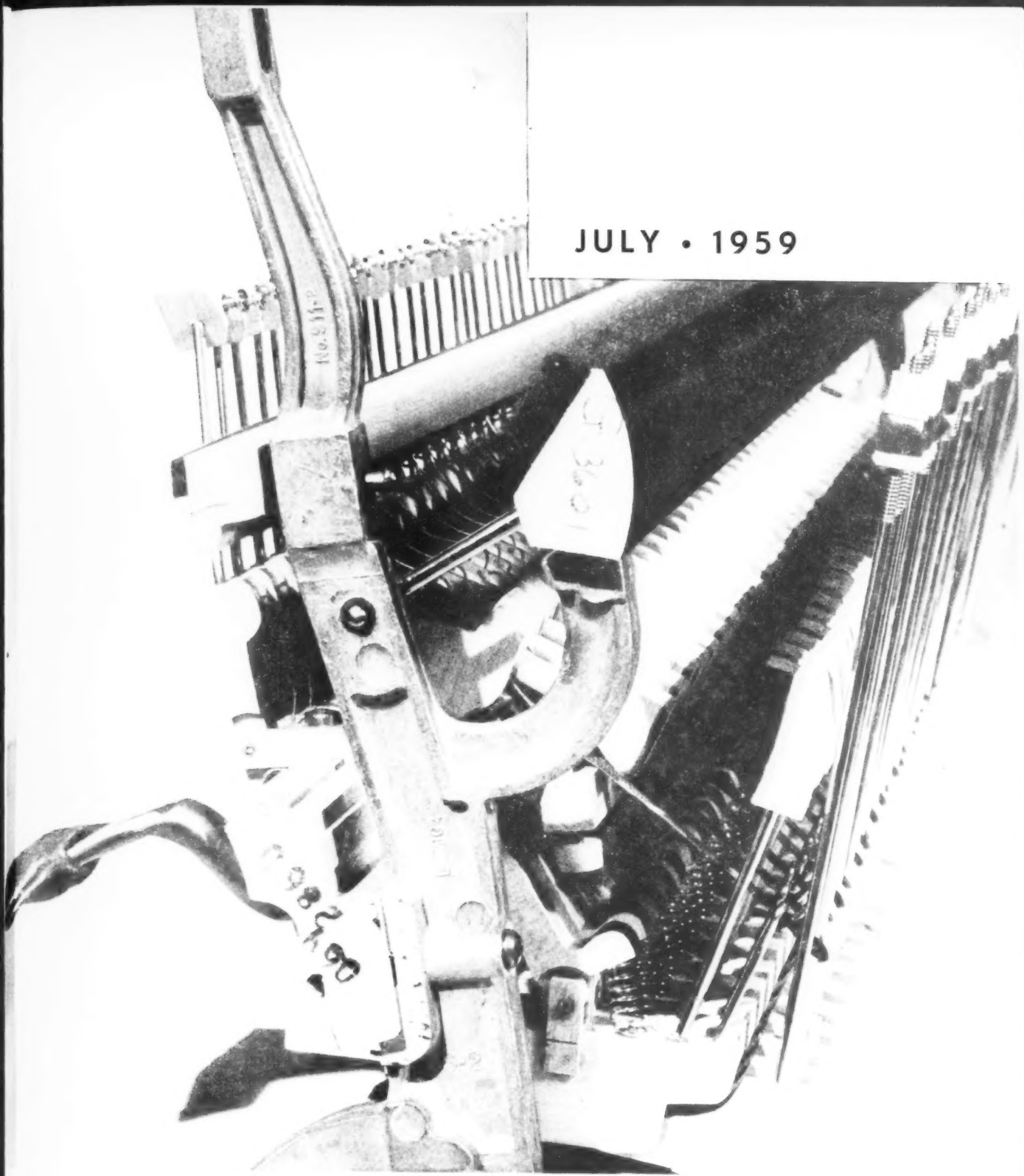

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THE SOUTHERN NEW ENGLAND *Telephone* COMPANY

CONNECTICUT
INDUSTRY

JULY • 1959
VOLUME 37 NUMBER 7

THIS MONTH'S COVER photo shows partly completed piano action movements revealing intricate, coordinated combination of metal springs, pins, rods and hardware with wood and felt. Cornwall & Patterson Company, Bridgeport, manufactures 700 different metal parts making up the piano's "insides."

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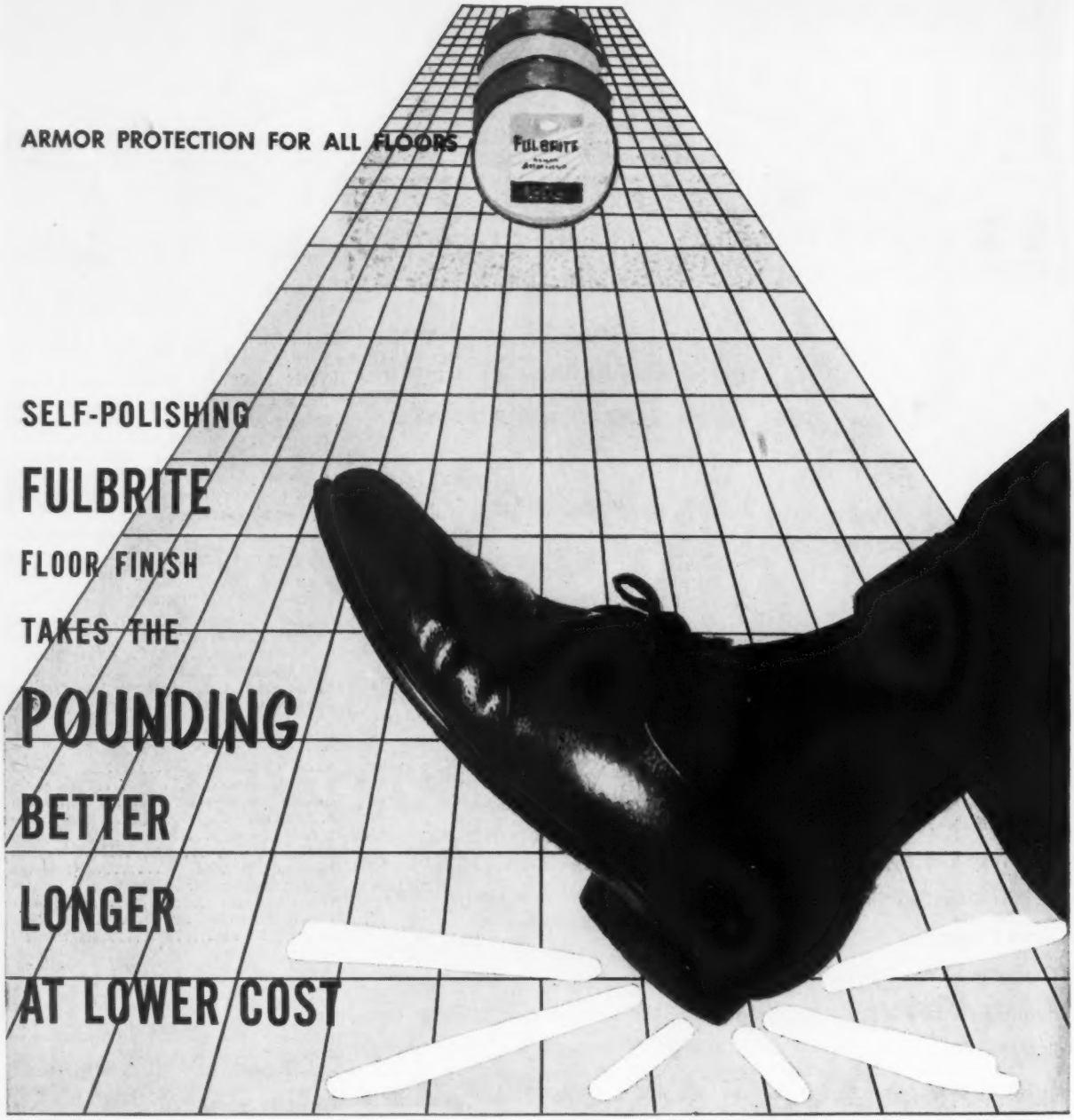

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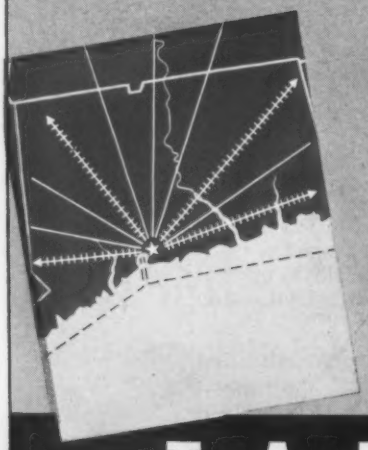

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THE CHANGING THAMES

By KENNETH E. STOBER, Plant Manager
Allyn's Point Division, Dow Chemical Company, Ledyard, Conn.

♦ IT is now eight years since my first visit to and appraisal of the Thames Valley area in eastern Connecticut. If what has happened in eight years can be a measurement of the future of eastern Connecticut, perhaps my thoughts and comments may be of interest to others in Connecticut.

Certainly, as eastern Connecticut develops and prospers, so will the state of Connecticut progress.

Recently, on a beautiful clear day, I had the opportunity to fly from the mouth of the Thames river to its juncture with the Shetucket, Yantic, and Quinebaug rivers. The sun was so bright that a good pair of sun glasses was necessary to bring into proper perspective the present activity in the Thames Valley. The sun glasses I used were unique since they gave me a comparison of present activities with those of a short space of eight years ago.

Flying in from Fishers Island at about 2,000 ft. elevation, the mouth of the Thames is a most impressive sight because of its natural harbor facilities. Not many large ships in the harbor, however, and looking back eight years, not much change. To the right is Trumbull airport which could be one of the best in the state. Directly on the Groton banks of the Thames I immediately noticed the Charles Pfizer Company and the Electric Boat Division of General Dynamics Corporation. Both of these companies have changed markedly in the last eight years, but, you get the impression from the air that they need room to expand.

Looking left along the New London shore, I can see the many resort beach areas, U. S. Navy Underwater Sound Laboratory, the New London City pier, and the New London Terminal Company pier. Much activity is evident on both sides of the river harbor as far as the Gold Star Memorial Bridge.

As I fly on up the river past the bridge, the Navy activity at the Sub Base impresses me. To facilitate the handling of nuclear submarines a rapid change has occurred during the last eight years. The Robert Gair Division of Continental Can Company, Robertson Paper Box Company, and my own company's plant, Dow Chemical, above Gales Ferry, indicate continued activity as well as growth during the last eight years.

On the left I follow the progress of the Connecticut Turnpike stretching from Old Saybrook to Jewett City. Outside of the road itself, nothing, it appears, has changed in the last eight years.

Oh, yes, and down below, I see the outlines of Olin Mathieson's new plant in Montville and farther along on the east bank, American Thermos Products Company. Looking back down the river, I can see Connecticut Light & Power Company's station below Robert Gair.

As you fly the Thames, you realize that below you is 14 miles of deep water transportation—a harbor 14 miles long with very little industrial development on its banks. The question arises, why? Can it be that the area hasn't planned for it, or is it just coming in the years ahead?

On both sides of the river you can pick out water reservoirs, ponds, and lakes as well as streams that serve as water resources for eastern Connecticut. There has been some development in this area during the past eight years, but a question comes to mind. With the expanding industrial potential of the Thames Valley, just how much water is available? Will it be preserved in an orderly fashion? Time will tell.

As I look down on the towns on both sides of the river between Norwich and New London, one thing is outstanding as a change during the last eight years. The housing developments and the new schools, and the shopping centers are most evident. New people are coming into the area. People are moving. I get the impression from the air that these developments are just growing in any haphazard way . . . . the easy way out. Planning for this development is for the future, perhaps, after the people have become aware that it is too late to do much about it.

Approaching Norwich, I can pick out the three rivers flowing into the Thames plus the Connecticut Turnpike within a stone's throw of the city. Outside of some improvement in highway approaches to the city on the east side connecting into Route 12, there is not much evidence of change in eight years. Industrial activity appears to be about holding its own—no new plant sites or industrial buildings can be noted. You wonder what's wrong—maybe it's for the future.

Circling Norwich and looking still further north, I can see river valley areas where some new industries are springing up as a result of the Turnpike. This brings to mind the fact that the Pike can be the driving force capable of changing the tempo of all eastern Connecticut. If you couple this fact with the dynamic potential of the 14-mile Thames Harbor, you get the impression that the entire area is just on the verge of a new era of development. I've been here only eight years. However, the picture is changing slowly but surely. The tempo of change is accelerating.

As we arrived at Trumbull Airport, I slipped off my sun glasses to look again through the mind's eye. What of the future for the area? Not only was the sunlight bright but also the future, as well. Certainly, all those industrious people below, enjoying the fruits of their hard labors, will not pass up the opportunity to plan and guide this area's development. Civic-minded people will donate their time to aid in preparing plans for an orderly development. The entire Thames Valley will be considered in their planning as a unit.

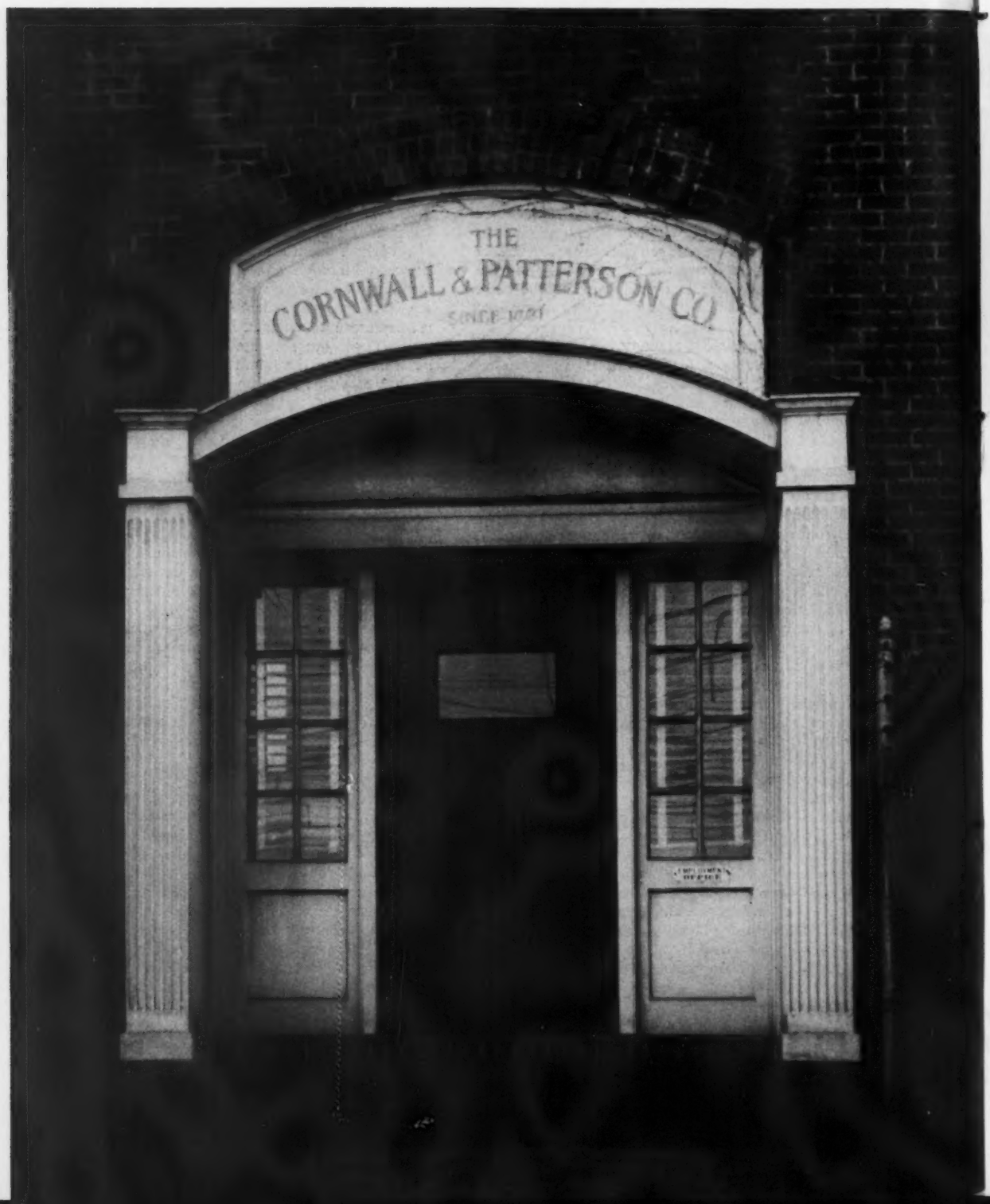
The towns, themselves, will need dedicated, progressive planning groups to further the Thames Valley plans. All facets of the many problems must be studied and planned to promote an orderly development. The best plans will never be quite good enough, but they will be measurably better than no plans at all.

The Thames is changing slowly, but tomorrow the tempo may accelerate. Are we ready for it?

Mr. Stober, the author of this month's guest editorial, has been associated with the Dow Chemical Company in various capacities since graduating from Montana State College in 1936 with a B.S. Degree in Chemistry. He is a director of MAC, chairman of Area Public Affairs Council of the Norwich Chamber of Commerce, and trustee of Mitchell College, New London. He has held his present post since his transfer from Dow's Midland, Michigan plant in 1951.

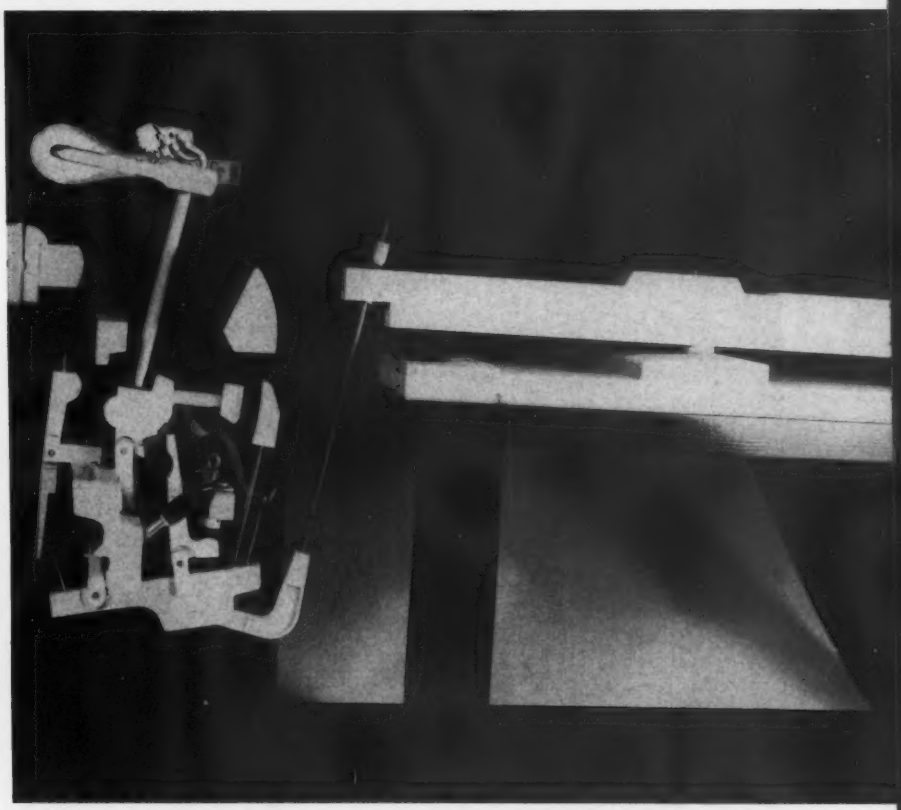
Handmaiden to American T

Entrance to the Cornwall & Patterson Company has been modernize but the remainder of the plant has retained its original look. The com pany is a leader in a rather unique field and supplies 65% of all pian hardware to approximately thirty American piano manufacturers.



Troubadors

Preston I. Carnes, general manager.



Hammer stroke action gave the piano a new range, versatility and diversity. It enabled full human control over sound and tone. Pressing the key (extreme right) puts into motion the many hammer parts. Felt hammer (top left) strikes the string.

■ IF you were asked, "What product contains 12,000 parts, takes months to manufacture, has, over the years, provided more entertainment than any other source, owning it once represented a hallmark of success and, though not a necessity, was often seen in the frontier log cabin against an environment lacking the rudimentary comforts of a tub?", you might scratch your head perplexingly. Yet, the answer is obvious—the piano.

Role in Piano Production

The history of the American piano is a veritable romance, a saga of our native troubadour. Its use, growth and improvement paralleled our technical know-how, mirrored our social needs, whims and outlooks, enriched our vocabulary with terms like "tin pan alley," "pianola" and the still prevalent but not so applicable suggestion "put a nickel in it!" It was the rallying point of home entertainment, the family hearth of the living room.

Connecticut has continuously played a leading role in this American drama. Ivoryton, Connecticut, derived its name from the processing of African ivory into piano keys. Since 1881, The Cornwall & Patterson Company in Bridgeport has been manufacturing fine piano action and case hardware parts for the trade. Piano makers throughout the country, Canada and several European nations depend on Cornwall & Patterson to provide them with 700 different intricate pieces making up the highly complicated, sensitive, punishment withstanding "insides" of the piano.

Cornwall & Patterson supplies nearly 65% of all piano hardware for approximately thirty manufacturers. Its name has become synonymous with high quality piano parts. If you own a piano the chances are it contains Cornwall & Patterson parts. The Company sells to famous names like Steinway, Baldwin, Wurlitzer, to name just a few. Truly, it has helped supply music to millions. For many of us, the tinkling piano was the first music we heard.

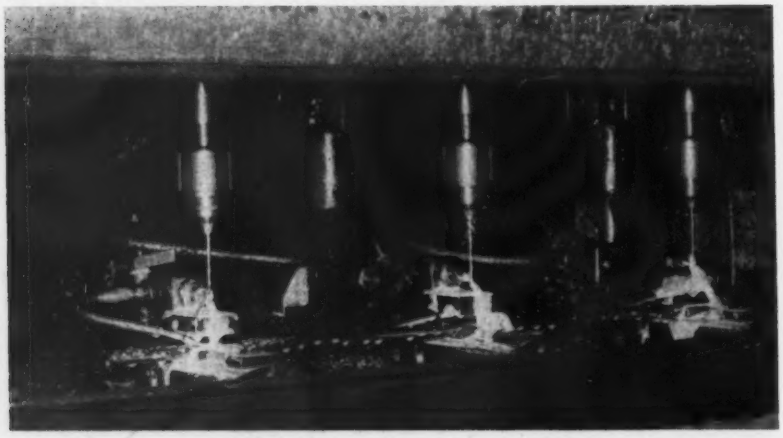
Although there is no music emanating from the three-story, red-brick Cornwall & Patterson plant, there is a unique melody which hasn't altered for nearly a half-century. The hum of busy lathes and drills, the staccato-like beat of the pierce and trim press, the rumble of a barrel tumbling operation and the hushed shrill of a cutting gear, all conducted by knowing hands with many years of skill.

Looking at the Cornwall & Patterson building from a distance, one sees an old, staid structure. There are no glistening steel-rimmed windows surrounded by modern cement finish. Inside, the machinery looks deceptively antiquated. But don't judge a piece of equipment by its shine and modern lines. In reality, these units are highly efficient. They were designed by foresighted men years ahead of their time. They produce intricate metal parts at speeds which belie their age. The Company is a leader in its field. These machines, with minor modern adaptations, can still make piano parts more efficiently than by any other known method.

An Italian Concept

The piano is an unequaled instrument. Since that day in Florence, Italy, 250 years ago, when Bartolomeo Cristofori stepped back from his "piano e forte" and surveyed his work with pride, the basic piano structure and design hasn't changed. To that Florentine artisan we owe the invention of the hammer stroke action from the outside key on the keyboard, to the strike against the inside string. This enabled full human control over sound and tone; it gave the piano a versatility which its predecessors—the dulcimer, clavichord and harpsichord—lacked.

Agraffe drill built in 1925 by the company can be adjusted to drill one, two or three holes in the agraffe piece used in grand pianos to bear down on strings producing desired tonal qualities.



Drilling unit was developed by the company for drilling holes in damper rods allowing liberal adjustment of spindle heads to accommodate varying rod lengths.

The action made possible the "piano" (soft) and "forte" (hard or loud) sounds determined by finger pressure. It opened a new musical universe, a range, a gradation and diversity capturing all the sounds and fury of human experience. In time, it would become our most important solo instrument.

Yet, during the 18th century, pianos were frail affairs. They contained thin wire strings held by a wooden frame. The array and complexity of iron bars, pins, springs and plates seen in pianos today was unheard of in that era. Interestingly enough, there was a distinct reluctance to use metal for resonance purposes; the wires could not withstand hard pounding; hammers were tiny and light. Choosing the most acoustically favorable spot to strike the string was a problem not approached by scientific computation. Hence, the early pianofortes lacked a rich, sustaining quality.

It took American ingenuity to evolve the piano to undreamt heights. The first reference to the "pianoforte" in America occurred in the March 7, 1771 issue of the *Massachusetts Gazette*. The announcement concerned a postponement of a musicale featuring "select pieces . . . on the Forte, piano and guitar." The erring typesetter was evidently not a musician and unfamiliar with the Italian term. Later that same month, 28 year old Thomas Jefferson wrote to his European-bound agent requesting he purchase the instrument, "I have . . . seen a Fortepiano and am charmed with it," young Jefferson stated.

Four years later, a Philadelphia merchant advertised he had made "an extraordinary instrument by the name of pianoforte." This seems to be the first piano made in America; the first attempt at what was destined to become American supremacy. But the association of prestige and culture with London, remained for several decades following the Revolutionary War. Nearly all pianos were imported from England.

American Piano Takes Lead

From 1800 on, however, the American piano began to take over. They were manufactured in New York, Philadelphia and Boston. Up to this time, practically all pianos sold were horizontal square-shaped "grand" type sitting on three or more legs. But an audacious Philadelphia resident, John Isaac Hawkins, a civil engineer with some metallurgical knowledge, stood the piano uncourteously on its end. This became the upright piano. The "portable grand", as Mr. Hawkins called it, saved floor space and "stayed in tune five or six times longer."

The Hawkins' piano of 1800 vin-

tage encompassed several radical features. The sounding board was suspended in a metal frame braced by iron bars. The upper bridge was metal and the tuning pins were screws placed in sockets in the metal wrestpin block. But these innovations were too progressive for their time. Several years passed before some of these changes were accepted. Twenty-five years later, Alpheus Babcock was granted a patent on a one piece cast iron frame. This solved the problem of wire string tension and paved the way to ultimate American triumph in piano manufacturing.

In 1829, an estimated 2,500 pianos were made in the United States—a country with 12 million population. In other words, one new American piano was being built yearly for every 4,800 persons. Following the 1840's, the American dream began to take shape. Immigrants poured into the country, enterprises mushroomed—cotton mills in New England, vast Southern plantations to feed the hungry mills, railroad lines were branching out to new lands, the electric telegraph came into being.

America was eager to sing of its achievements. And the piano accompanied the lusty voices. In July 1867, the *Atlantic Monthly* published an article commenting that "almost every couple that sets up housekeeping on a respectable scale considers a piano only less indispensable than a kitchen range." In 1870, nearly one person out of 1,540 inhabitants purchased a new piano.

Cornwall & Patterson Launched

But the piano heyday was just beginning and Cornwall & Patterson were in the pangs of birth. Prior to the Civil War, James T. Patterson had established the Bridgeport Organ Company. He made an organ which sold for $90. Following the war, the Company reorganized and was called "Patterson Organ and Piano Company." In 1881, Jesse B. Cornwall joined the firm and the name was changed to The Cornwall & Patterson Company, the title it bears today.

The Up and Down Cycle

This Company quickly achieved a reputation as a leader in the making of piano action hardware and case hardware. Its products were sold to customers in U.S., Canada, England, Sweden and Czechoslovakia. The tremendous expansion of the American piano occurred from 1890 to 1910. Between 1890-1900, piano production multiplied 5.6 times as rapidly as the human population. During the next ten years, Cornwall & Patterson enjoyed the amazing upsurge of the player piano business.

But the piano could not remain king for long. Being a social instrument it became a victim of social change; it was dethroned after World War I. Families became more mobile and split into smaller units; out-of-home entertainment became prominent; the stage, movie screen, radio and victrola offered "professional" entertainment as contrasted to the "homely" variety. In many American homes, the piano stood silently in the living room corner, its keyboard cover closed, a lonely and unattended object.

By 1920, it was calculated that there existed one piano for every fifteen persons. This was the peak, the zenith of the American troubadour. Afterwards, production leveled off reaching a plateau of accepted respectability. The social revolution had decrowned the piano but it has maintained its nobility.

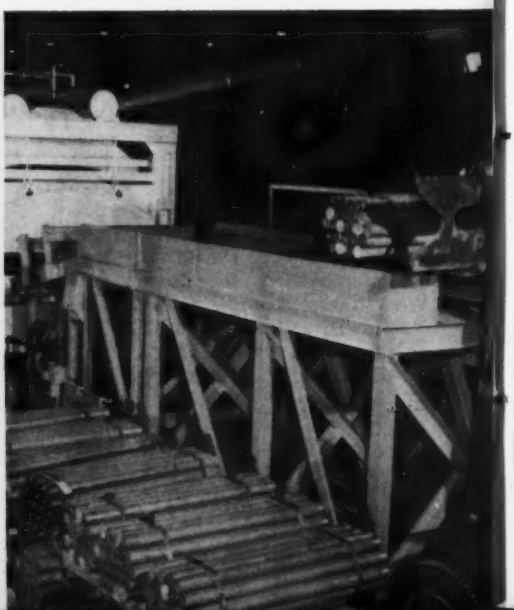
(Continued on page 34)

Contour forming unit for bearing bar. The bar places tension on strings in the vertical or spinet piano for specific tonal qualities.

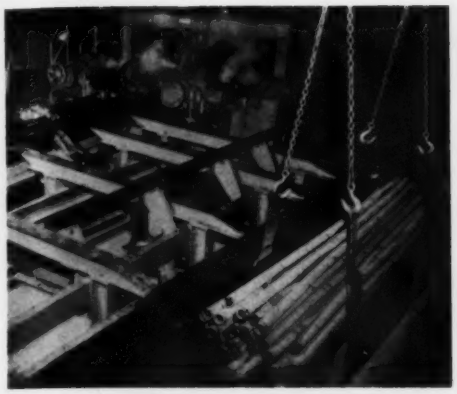
Damper rod pin insertion unit in action. Designed in 1915, it is adjustable for number of pins and their locations.

Aerial view of Scovill Tube Mills . . . the industry's newest and most advanced tube producing unit . . . at New Milford.

Scovill in New Milford



(Left) A "crane's eye view" of one of the three one-quarter mile long bays which have been designed exclusively for production of tube. (Right) Billets run from 3" in diameter and 48" long to 6" in diameter and 72" long. Here 3" diameter billets are being delivered to the pre-heating furnace.



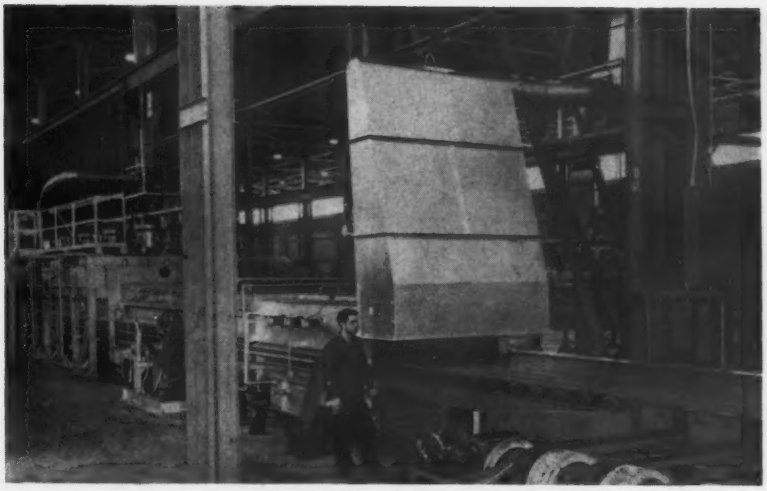
This powerful 19" hot-piercing machine establishes the basic close tolerance dimensions which "follow" the tube all the way through to finish size.

This Scovill-conceived tube elevator removes drawn tube from discharge pit of 150,000 lb. capacity five-position copper tube drawbench to redraw position on the bench without the use of a crane.

■ IN a series of pioneering leaps covering the longest span of years ever traveled by a copper and brass mill products producer—157 years, to be exact—Scovill Manufacturing Company has vaulted the years from its lowly start, in a household plant making brass buttons, to become the owner of what is believed to be the world's most modern "unitized" plant for the production of the highest quality copper and brass tube mill products.

This new mill, previewed on May 7 by a large contingent of newsmen, largely from technical and trade publications, and engineers and representatives of Scovill suppliers and customers, marked the culmination of three years of planning by company officers and engineers to establish new tube producing facilities to serve the broad plumbing, heating and air conditioning markets using various types of copper tube and pipe. Lacking space for expansion of its 39-year old tube mill in Waterbury, that mill was re-engineered, its equipment modernized, and a new rural setting of 72 acres on the Housatonic River in New Milford

(Continued on page 30)



Discharge end of direct gas-fired, forced-circulation, roller hearth furnace for the scale-free intermediate annealing and wet quenching of copper or brass alloy tube.

This pneumatic tester safeguards coiled tube against the remote possibility of pinholes showing up in a customer's tube installation.

Cases of long-length tube awaiting shipment. Unique Scovill case design and packaging methods assure delivery to customers in undamaged, ready-to-install condition.

United Shoe Machinery Shows "POP" Division To Press

The new Shelton plant of the "Pop" Rivet Division of United Shoe Machinery Corp. This modern building has 140,000 square feet of manufacturing space.

■ THE United Shoe Machinery Company held a Press Preview at its Shelton Division plant on River Road, Shelton, on April 14, where it has consolidated sales and manufacturing activities of its "Pop" Rivet Division from West Medway and Beverly, Massachusetts.

The most compelling reason for the move, as explained by company officials, was the need for more manufacturing space to keep "Pop" rivet production in line with customer demands. That demand jumped 80% in 1958 over 1957 while a severe drop occurred in the remainder of the fastener industry. A second reason for the move to the new Shelton location was to integrate "Pop" rivet production in an organization (Shelton Division—formerly known as S.O.&C. Division, manufacturing eyelets—which was moved from Ansonia to the new 138,000 square foot plant) with more than 50 years of design experience.

Among the explanations and demonstrations made during the press review were those giving a definition of "Pop" rivets, how they work and their major advantages.

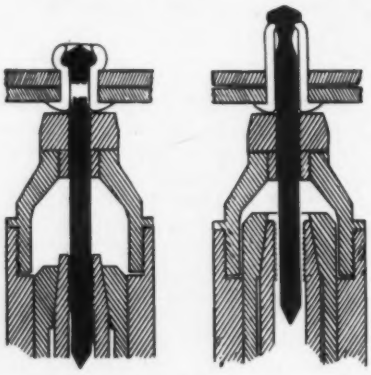
"Pop" rivets, it was stated, are high-strength, precision-made hollow rivets assembled on solid mandrels which, although specially designed for "blind" fastening where there is no access to the other side of the work, are frequently used in non-blind applications.

"Pop" rivets, it was further explained, are inserted by the operator and can be set with either manual or power tools producing a tight, vibration-proof clinch over a wide range of stock variations. Among the major advantages of using "Pop" rivets are said to be: Lower installation cost because they help to eliminate sub-assemblies; high production with unskilled operators; permitting design flexibility and stronger and more vibration-proof assemblies; lower inventory because of the wide range of grip; and less supervision of production.

In acquainting visiting newsmen with the rapidly expanding Pop Rivet Division activities and some of the products made by other divisions of United Shoe Machinery Co., Charles E. Heilig, Jr., sales manager of the Pop Rivet Division, said, in part: "As you probably know, "POP" Rivets were developed by a British subsidiary of United Shoe Machinery Corporation, and are widely used in England for all types of structures. The next time that you fly the Viscount on Capital, Northeast or Continental Airlines, notice the number of these rivets on the wing flaps, door assembly and other structures all over the ship. The British have made great strides in the use of this type of fastener and are now selling it throughout the world.

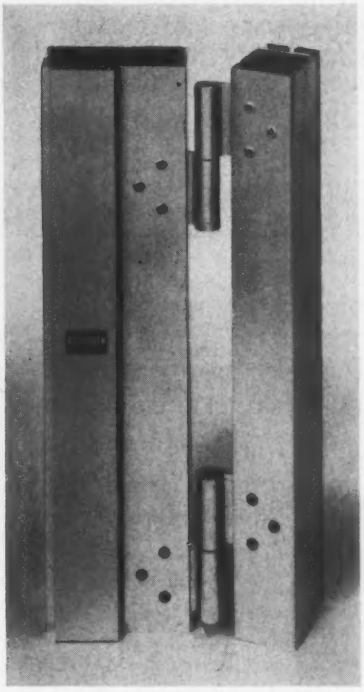
"We, at United Shoe, watched this growth with interest and at the same time started seriously exploring their market potential in the United States. At that time, we began to import not only the rivets but the tools. Production facilities then were installed at our Beverly factory. Since then, we have been in a constant battle to match our production with demand. We built our production facilities at Beverly to the point where they simply outgrew the space that was available. Moving them to Shelton where we have considerable room for expansion will improve our position.

"Both we of the "POP" Rivet Division and United Shoe management be-



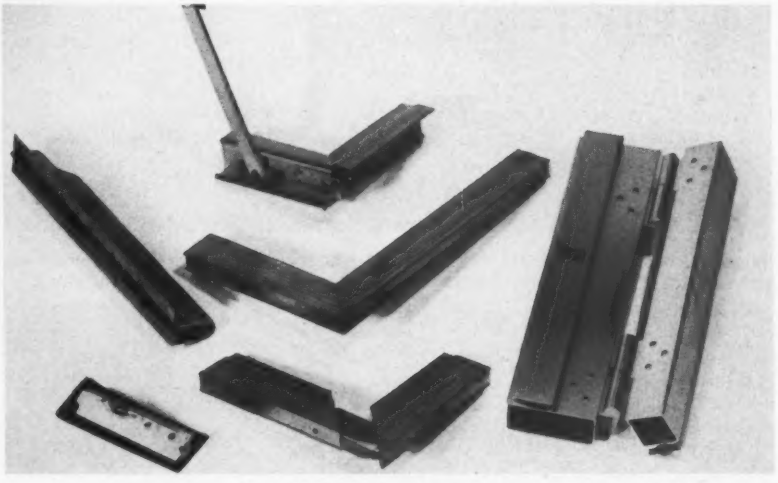
Here is how the Pop Rivet works. Sketch shows how tension applied to the mandrel pulls it into the rivet shank to spread and set it.

A typical example of how Pop rivets are used in large metal panels with lightweight Pop riveter when there is no easy access to the other side.



A close-up of a hinge in which Pop rivets are used to assemble its various pieces.

Charles E. Heilig, Jr.



These are the pieces fastened together by "Pop" rivets to make a line of hinges.

lieve that the fastening market is in for a tremendous boom, and this new facility that you toured today is a token of our faith in this premise. Not only in facilities but also in product development, our central engineering in Beverly is constantly developing and refining "POP" for the American market and some notable additions in rivets and tools have been accomplished.

"An additional development that will be of future importance is the sealed end or Imex Rivet. This new rivet, which is pressure tight and was developed for pressurized aircraft cabin and integral fuel tank use, will go into production later this year.

"You are aware, I am sure, that United Shoe Machinery Corporation has many interests in the assembly field. Besides "POP" Rivets, we manufacture adhesives through our key B. B. Chemical Company for bonding of metal to metal, plastic to plastic and paper to paper and combinations of these to each other . . . through our Thermogrip, which is a thermo-plastic cord-like dry adhesive, applicable to high speed packaging machines, for gluing of paper or metal foil . . . through our eyeletting facilities which you have seen here today, in part, and which is a process, incidentally, that is growing rapidly in metalworking plants . . . and through a number of other divisions of the corporation including our stamping division and Powersert products. We have a vested interest in the assembly market, which as you can see, ranges all the way from packaging to building construction. All of our divisions anticipate a very active sales growth and we are naturally exploring other products and markets."

TWO-WAY FIRE PROTECTION AT BURNDY

Burndy maintenance engineer resetting AMVAD control panel after fire indication.

Heat-sensitive automatic fire detector in ceiling guards early electrical devices and rare books in the Burndy library.

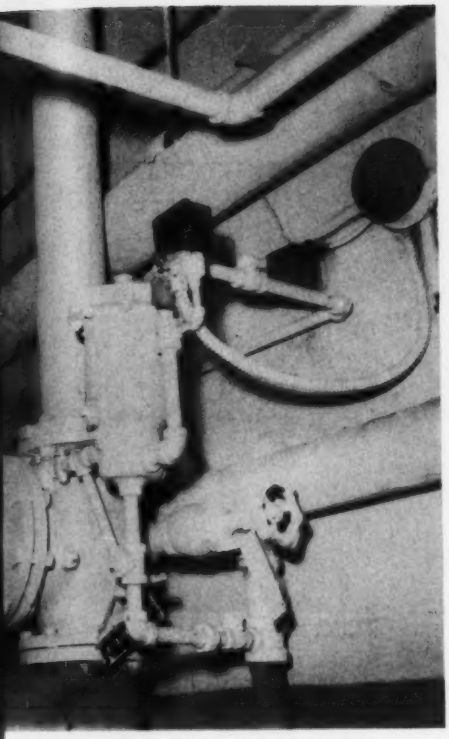
Manually operated pull boxes are strategically [illegible]ibration [illegible]he plant [illegible]ystem.

■ INDUSTRIAL fire losses are now running into the hundreds of millions of dollars per year—an all-time high. Sadly enough, all indications point towards even greater losses next year. Question is, what can plant engineers do to prevent their company from becoming part of next year's fire loss statistics.

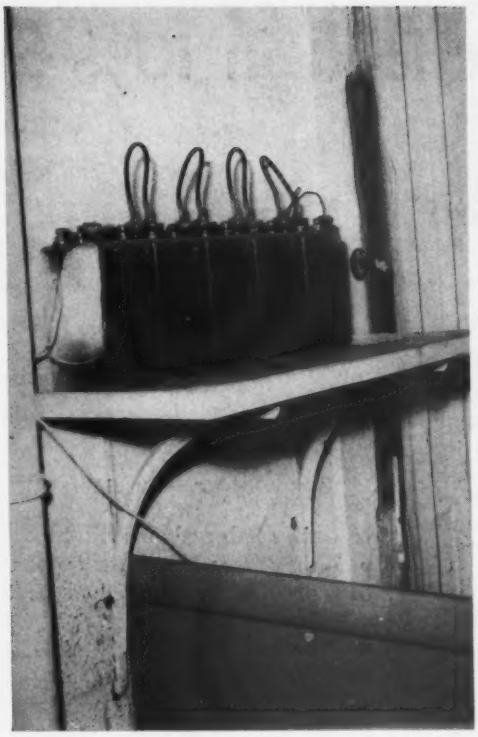
In an attempt to minimize losses thousands of plants have installed low-cost automatic fire alarm systems to provide immediate detection, location and warning of fire. On the other hand, sprinklers, whose fire fighting advantages are obvious, form the bulwark of protection systems in many other plants. According to fire experts, the combination of a fire warning system and sprinklers provides the most complete protection available today. This type of arrangement will not only warn of fire—24 hours a day, every day in the year—but will extinguish a blaze as well.

Burndy Corporation, the country's largest exclusive manufacturer of electrical connectors, has just such a combination at its Norwalk, Conn. headquarters. Under the direction of chief plant engineer, Hyman Scheinbein, Burndy's own maintenance department installed a comprehensive automatic fire alarm system, and tied it into the company's existing sprinkler network.

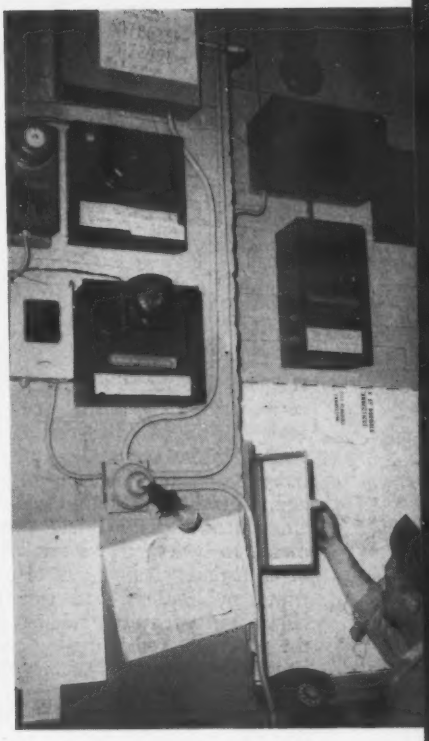
Development of Burndy's system re-



Vibration fire alarm bell mounted in boiler room of he plant is one of many signals included in the ystem.



Standby, trickle-charged batteries maintain full operation of the fire alarm system in the event of power failure.



Warning bell for Burndy's AMVAD system at Norwalk fire department.

sulted from a careful two-part study, Part one was devoted to a general survey of industrial fires, and part two devoted to an evaluation of the fire protection equipment.

The survey revealed a number of unusual facts. Chief among them was that virtually every large-loss industrial fire could have been controlled, or prevented altogether, if it had been detected early enough. Of 505 fires which caused damage of $100,000 or more, extensive destruction in 428 of them (fully 85 per cent) was due to delayed discovery or watchman failure. Obviously, early detection of these blazes would have given fire fighters an advantage of precious minutes, which might have resulted in savings of millions of dollars.

Part two of the study—evaluation of fire protection systems—pointed up Burndy's need for an automatic device that would protect unsprinklered areas. Besides covering these, the alarm would also work hand-in-hand with the sprinklers. Additionally, the engineers concluded, the fire alarm system would notify municipal fire headquarters.

Once the need for an automatic fire alarm system was established, Burndy's plant engineers outlined situations an efficient system would be expected to take in stride. For one, it would have to be capable of protecting a number of buildings covering a reasonably large area, since company headquarters consists of six structures spread over some eleven acres. For another, the varying nature of the buildings to be protected—a warehouse, factory buildings, two office structures and a library of precious manuscripts and early electrical machines—required that the system be made up of both automatic and manual fire detection stations. Because of the low level of traffic in the Burndy library—one of the finest on early science and technology in the nation—automatic detection was mandatory. (Incidentally the library building could not be sprinklered because of the danger of accidental water damage to its irreplaceable contents.) On the other hand, manual pullboxes would be more than adequate for corridors of office buildings since they were well-traveled most of the dav.

To insure conformity to standards of good practice, Burndy followed the recommendation of the National Board of Fire Underwriters. As regards power supply, this meant that the system would be not only electrically supervised, but also would have a reliable secondary power source. Electrical supervision means that should a fault occur in the system's wiring or components, a trouble bell rings to alert maintenance personnel. The secondary power source has another function: it takes over, automatically, in the event of either power failure or interruption. When normal power comes back on, the secondary source is removed from the line—also automatically.

Once the specifications were detailed, Burndy contacted the Edwards Company, Inc., one of the nation's oldest and largest manufacturers of electrical fire alarm systems, also located in Norwalk.

One particular fire alarm system, AMVAD (Automatic-Manual-Vibrating bell-Ac-Dc), seemed to fit Burndy's needs perfectly. Basically, an AMVAD detects fire and locates it according to pre-established zones—as many as required. When fire is detected, anywhere, the system immediately sounds a general evacuation alarm, indicates the fire zone, and, via a pair of leased telephone lines, sends a signal to municipal fire headquarters. A switch on the control panel allows for periodic testing of the system without sending an alarm to fire headquarters. Since AMVD operates on low voltage no conduit or pipe was required.

Two types of automatic detectors are used in the Burndy AMVAD system. One is set for fixed temperature, either 135° or 200° F., depending upon the particular area being guarded. The second combines a rate of rise feature

(Continued on page 56)

Pitfalls Described in 10% Sampling

By SAMUEL SIMONOVITZ
Statistical Quality Control Consultant
West Hartford, Conn.

SAMUEL SIMONOVITZ

■ I HAVE recently found to my amazement and horror that supervisory personnel in several manufacturing companies ordered a 10% sampling plan in Receiving Inspection and in Final Inspection. I use the word amazement because I had permitted myself to believe that several decades of statistical quality control conferences, publications, and free public classroom instruction would have made the pitfalls of such sampling common knowledge in an alert and progressive industrial area like Connecticut. I use the word horror because of the realization that inspection by this plan permitted the acceptance of an excessive number of units whose failure in performance could result in loss of life and property. There was no question that failures would also result in loss of contract and company reputation.

Let me identify the 10% sampling plan and explain why it should not be used. 10% sampling is performed as follows:

1. Select 10% of the units in a lot and inspect them as a sample.
2. Accept the lot if none of the sample units are defective.
3. Reject the lot if one or more of the sample units is defective.

Old timers will recognize this plan. It was standard inspection practice in the early days of manufacturing. Its brevity and clarity appeal to supervisory personnel who are too busy or impatient to instruct themselves and their inspectors in the sophisticated sampling plans of modern statistical quality control.

Its use was in violation of the basic requirement that the sampling risks measured by the probability of acceptance inherent is every sampling plan must be known in advance. Quality assurance is not possible unless the selection of the sampling plan is made on the basis of such knowledge.

The probability of acceptance of a lot on the basis of the 10% sampling plan identified above is computed from the following combinatorial formula:

$$P_o = \frac{C_n^{N-M}}{C_n^{N}}$$

where

- N = the number of units in the lot
- p = the percent defective of the lot
- M = pN = the number of defective units in the lot
- n = the sample size
- P_o = the probability of acceptance (the probability of 0 defectives in the sample).

The probability of acceptance of a lot of 50 that is 4% defective and inspected by the 10% sampling plan is computed as follows:

$$P_o = \frac{C_5^{48}}{C_5^{50}} = \frac{48!\ 5!\ 45!}{5!\ 43!\ 50!} = .808$$

The probability of acceptance is the ratio between the number of combinations that can be formed from the 48 acceptable units taken 5 at a time and the number of combinations that can be formed from the lot of 50 taken 5 at a time. We conclude from the computation that the probability of acceptance is 808 out of a thousand.

The following table summarizes the operation of the 10% sampling plan for lots of identical quality (4% defective) containing 50, 100, 200, and 1000 units:

Operation of the 10% Sampling Plan — Given Quality and Lot Sizes

N	50	100	200	1000
p	.04	.04	.04	.04
M	2	4	8	40
N − M	48	96	192	960
n	5	10	20	100
c	0	0	0	0
P_o	.808	.652	.424	.013

Note carefully the difference in the probability of acceptance P_o between lots of identical quality that differ only in lot size. We can conclude that under the 10% sampling plan, small lots have a greater probability of acceptance than large lots. Computation will disclose that this applies to any level of quality.

Readers who question this conclusion are invited to prepare lots of these sizes and quality and to inspect them many times, replacing the sample into the lot after each inspection. They will find that as the number of inspections increase, the proportion of times that the lot is accepted will approach the computed probability of acceptance stated in the table.

The mathematical principle under discussion is elementary and is known to every person trained in statistical quality control. It has also become known to persons not trained in this science who by careful observation and experience have discovered that some of their customers generally reject large lots but accept small lots of identical quality. Alert vendors and production foremen become aware of this principle when inspection is performed on the basis of the 10% sampling plan.

Conversely and obviously, compa-

(Continued on page 29)

The Show Will Go On

NO CRYSTAL BALL

Lacking a crystal ball—and under pressure to meet July publication deadlines, we released this ad-message not knowing whether we would or would not be working now.

WORKING?

Assuming, hopefully, that we are working now —we are first cleaning up any June backlog, then proceeding with orders scheduled for July.

The June balances wouldn't have amounted to much percentage-wise anyhow because we didn't overbook orders nor pyramid promises. Some June steel was delayed as a result of production setbacks, due chiefly to minor breakdowns from pushing our equipment to extremes. Customers affected were notified immediately.

SHUT DOWN?

Assuming that we *are* shut down now—there's nothing to do except wait for a contract settlement, hoping it might come quickly.

LOOKING AHEAD

As matters stand we are booked solid for July. August and September are substantially spoken for, and some customers are coming in already with their fourth quarter specifications.

In any event, union-management differences will be resolved in one way or another and *the show will go on.* We expect to be prepared to resume near-capacity operations at our Portsmouth, Detroit and Eastern plants as soon as the all-clear signal is given . . . and to continue to take care of our customers' normal monthly requirements, as always.

MEANWHILE

Strike or no strike, our DSC Customer "Reps" are on the job to help you with yours. For complete information on DSC products and services—or to get your name on our ad-preprint mailing list and receive our brief, informal letters that accompany them monthly—just say the word to our nearest "Rep" or drop us a line to Box 4308, Detroit 9.

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News Forum

This department includes a digest of news and comment about Connecticut industry of interest to management and others desiring to follow industrial news and trends.

♦ PHILIP W. SCHWARTZ, a leading figure in the gun industry for the last fifteen years, has been elected vice president of manufacturing of the High Standard Manufacturing Corp. of Hamden.

Mr. Schwartz joined High Standard in July 1958 as works manager after having acted as a consultant on engineering and manufacturing to leading firearms companies.

♦ THE PACKERS DEVELOPMENT COMPANY, Clinton, has just recently perfected and introduced Autoflay, a mechanical skinning knife which enables a novice to skin an animal on the kill floor of a slaughter house as rapidly and expertly as a knife man with long experience.

A development of Richard W. Logan, president of Packers Development Company, the Autoflay is said to eliminate the need for skilled help and make possible continuous conveyorized slaughtering for the first time while permitting butchers to produce No. 1 hides completely free from fat, thus improving profit from hides and adding up to three pounds of saleable meat from each animal slaughtered.

♦ THE CHRISTIANSON Tool and Engineering Co., Viking Regulator Division, was recently given significant recognition by "Skin Diver" magazine, for the outstanding performance of the "Viking Regulator," a self-contained breathing apparatus for use in the sport of "Scuba" diving.

The two-page article in the February issue of "Skin Diver" tells of the beginnings of the development program that caused the Viking Regulator to be introduced in 1957, the engagement in 1958 of George Swindell, prominent in Connecticut diving circles, to help gain insight into and devise solutions to problems of breathing effort, reserve control, air flow and overall comfort that so often confront those who dive for pleasure or profit. The article also tells of numerous tests made with the Viking Regulator and gives complete technical details of its operation.

♦ THE ELECTION of Michael E. Errico to the position of assistant vice president has been announced by the board of directors of Laminated Shim Company, Inc., Glenbrook.

Mr. Errico, who has been employed by the Glenbrook concern for twelve years, was elevated from the position of executive assistant.

♦ MAJOR EXPANSIONS and improvements in availability and packaging of valves and fittings for copper and brass pipe and tube are now being instituted by Chase Brass & Copper Co. The present program will place the company among the largest suppliers of valves and fittings, the company has revealed.

Plans include an immediate addition of approximately 200 new items to Chase's present line, including additional types and sizes of wrought and cast solder joint fittings, drainage fittings, valves, and tube staples.

♦ A LINE of trough vises made of ductile iron, the new metal that combines the best features of steel and cast iron, has been announced by the Skinner Chuck Co., New Britain. The company claims that the unique properties of ductile iron will enable these vises to hold up longer in service with far less maintenance and at a lower over-all cost.

According to Skinner, ductile iron will give the vises extra strength to resist cracking, extra toughness to take abuse, extra hardness to withstand heavy blows, and extra rigidity for extreme accuracy and holding power.

♦ SELECTION of the Lycoming T53 gas turbine engine as the power source for the special power device for the B-70 weapon system has been announced by James R. Kerr, president of Lycoming Division, Avco Corporation, Stratford.

The B-70 is a Mach 3 bomber. The special device is used to provide stand-by power for the aircraft while on the ground.

♦ TWENTY-FIVE yarn and fabric manufacturing executives gathered at International Business Machine's edu-

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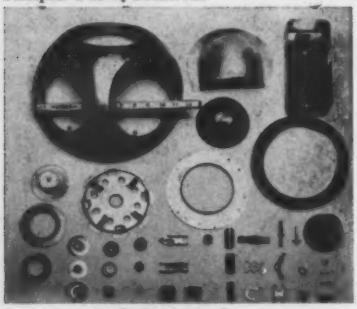

Ask For Brochure

The DooVal Mfg., Inc.
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cation center in Endicott, New York, recently for a close look at what data processing can do for the textile industry.

A featured speaker at the four and one-half day meeting was A. J. Eastwick, data processing manager of The American Thread Company, who presented a case study of his company's data processing program.

American Thread is nearing the completion of a four-year systems building project. The project will culminate this fall with the installation of an IBM RAMAC 650 computer, one of the first such installations in the textile industry.

Other case studies presented further illustrated the ways in which punched card and electronic data processing equipment can help management achieve improved efficiency and control.

♦ THE APPOINTMENT of Bernard Buck Taylor as customer service manager has been announced by The Capewell Manufacturing Co., Hartford. Mr. Taylor will be responsible for customer order processing and expediting for the company, which is a leading producer of hand and power hack saws, hole and band saws, hammers and ground flat tool steel.

Mr. Taylor has been associated with Buck Manufacturing Co., Inc., Providence, R.I., Industrial Bank of Commerce, Middletown, C.I.T. Corporation, New York, and Wright Aeronautical Corporation, Patterson, New Jersey.

♦ LEO A. MAYO, controller of The Connecticut Light and Power Company since 1954, died recently. A native of Fall River, Mass., he began his utility career with the former Waterbury Gas Light Company, which became a part of CL&P in 1931. In 1951 he was appointed to the newly-created post of director of methods and was elected controller in 1954.

Mr. Mayo was a member and past chairman of the management committee of the American Gas Association accounting section, a member of the steering committee of the accounting and finance division of the Electric Council of New England, member and past chairman of the accounting committees of the Edison Electric Institute and the New England Gas Association.

♦ BEECHER N. CLAFLIN has joined the Fafnir Bearing Company, New Britain, as counsel. He will assist administrative vice president Keith T. Middletown and other company officials in labor relations and corporate legal matters.

Mr. Claflin has practiced business and other types of law throughout Connecticut since 1947. Before joining Fafnir, he was a partner in the Greenwich law firm of Parker, Badger and Fisher. Previous to that, he was a member of the Stamford firm of Maguire and Cole.

♦ EVERETT A. WICKSTROM has been appointed credit manager for the New Britain Division of The American Hardware Corporation, according to an announcement by H. C. Jackson, assistant treasurer.

Mr. Wickstrom started with The American Hardware Corporation in 1946. In 1957 he was made assistant credit manager. Previously, he was employed by the Maxim Silencer Company and the Aetna Life Insurance Co.

♦ THE SUCCESSFUL DEVELOPMENT of a lightweight laminated plastic and aluminum plate called "Plastalum" has been announced by Richard T. Wall, vice president of CSW Plastic Types, Inc., Rocky Hill. The plastic and aluminum materials are laminated together mechanically using no bonding agent that will sometimes loosen due to plate washups or during press runs.

Plastalum plates are duplicate molded plates that can be mass produced economically and offer substantial plate cost savings to the letterpress industry without the loss of quality printing, according to the company.

♦ DURAND B. BLATZ was recently elected vice president and treasurer of The International Silver Company, Meriden, succeeding George L. Stringer, who has retired. Mr. Stringer will continue as a director of the company.

John F. Mickelson succeeds Mr. Blatz as controller and assistant treasurer.

Previous to joining International in 1957, Mr. Blatz was chief financial officer and general controller of Avco's Crosley & Bendix Home Appliance Division.

Mr. Stringer joined the company in 1933 as assistant credit manager. He was later named controller and became a director in 1942. Subsequently he became vice president and treasurer.

♦ THE APPOINTMENT of Harvey L. Spaunburg, Jr., as vice president of manufacturing, Robert A. Bode as vice president of sales, and Francis A. Carr as factory manager has been announced by The Hartford Special Machinery Company, Hartford.

Mr. Spaunburg, who joined the company in 1950, has headed the manufacturing division since 1957. Mr.

Bode has been with Hartford Special since 1947. He has been the firm's general sales manager since 1955.

Mr. Carr joined Hartford Special in 1955 and until recently has held the position of production control superintendent.

♦ A "SPECIAL REPORT" on fastener products has been offered by Stanley-Humason, Inc., of Forestville, a subsidiary of The Stanley Works, New Britain. The file folder contains engineering data sheets on the various types of fastener products manufactured by Stanley-Humason, Inc., and may be obtained upon request.

They contain the description, advantages and specifications for such products as hour glass (hairpin) fasteners, special application nuts, flat spring, retaining ring and custom screw machine fasteners.

♦ DIANE R. LANGLOIS, Hartford and Marion A. Schanz, Farmington, are the 1959 winners of Pratt & Whitney Foundation scholarships, it has been announced by Edward P. Gillane, president of Pratt & Whitney Company, Inc., West Hartford.

The two scholarships awarded annually by the Foundation, in honor of Clayton R. Burt and Frederick U. Conard, former company presidents, provide a four-year college education to each winner.

This bronze bell, purchased at the end of the Civil War by Union Hardware Company, Torrington, has been donated by the company to Tunxis Council, Boy Scouts of America, to be placed in the bell tower of a chapel being erected at Camp Workcoeman. Photo shows, left to right, front row: Lloyd L. Noyes, scout executive; Ray White, member of the council's executive board; Atillio Avallone, Sr., Union Hardware foreman; Ernest J. Pardon, superintendent; Clarence Lipe, general foreman. Second row, Paul Hawley, chairman of the Council camping committee; Simon Miller, machine shop foreman and Harvey Guildford, receiving room foreman.

♦ A NEW MODEL RL Shear-Flow industrial mixer has been announced by Gabb Special Products, Inc., Windsor Locks. Completely redesigned, the new portable mixer is said to represent a major advance in mixer design.

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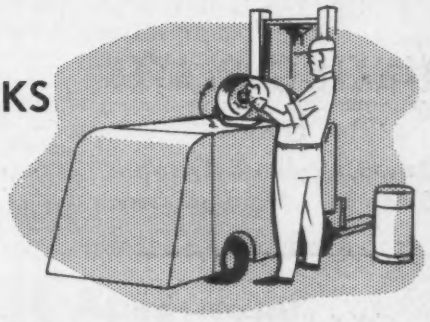

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Shear-Flow's new RL Hi Shear Head consists of two rotating impellers and two stationary stators enclosed within a cylindrical housing. The fine clearance between impellers and stators results in a more complete reduction of agglomerates within the mixture.

♦ THE ANDERSON OIL & CHEMICAL COMPANY, INC. of Portland, has announced the appointment of Arnold W. Ackerman as vice president and technical director.

Mr. Ackerman has been chief chemist and director of research for Anderson since 1941, and a member of the company board of directors since 1956.

Thomas M. Purtell has been named vice president and general manager of sales and as a director of the company.

Mr. Purtell joined the firm in 1947 as a sales representative, was named sales engineer in 1952 and general manager of sales in 1958.

♦ HORACE E. ROCKWELL, attorney and former partner in the law firm of Gross, Hyde and Williams, Hartford, has joined The Ensign-Bickford Company, Simsbury, as general counsel, it has been announced by Robert E. Darling, president of the company.

Mr. Rockwell was born in Claremont, New Hampshire and is a graduate of Kingswood Academy, Dartmouth College and Yale University Law School.

♦ CAMERON CLARK, JR. has been elected a vice president of the Warner Brothers Company, Bridgeport, and general manager of the Box Division, according to an announcement by John W. Field, president. Mr. Clark succeeds Bradford G. Warner, who is relinquishing his duties as manager to devote full time to the executive branch of the company as chairman of the recently formed executive committee.

Mr. Clark joined Warner's ten years ago. He was made assistant manager of the Box Division in 1956 and elected to the company's board of directors in 1957. He is a director of the Folding Paper Box Association of America.

Mr. Warner started his career with the company in 1918. He was elected to the board of directors in 1920 and made secretary in 1922. He became manager of the Box Division in 1932, was elected a vice president in 1946, and became chairman of the executive committee when it was formed last year.

♦ A NEW VINYL electrical tape, which can be used for insulation and other electrical taping jobs, has been introduced by Reeves Soundcraft Corporation, Danbury.

According to company officials, the new electrical tape will protect against four major causes of insulation failure. These are moisture, surface contamination, corona and excessive heat.

The new tape prevents corrosion when applied to pipe and other metal surfaces. It may be used for harness wrapping of wire and cable groups. It is said to give protection on tool handles and sharp edges.

Heli-Coil's new hopper feed and lightweight gun is demonstrated by John Fasano, director of sales. It is part of a complete line of automated power inserting equipment recently introduced by Heli-Coil Corporation, Danbury.

♦ SHOWN for the first time by the Heli-Coil Corporation, Danbury, at the Design Engineering Show held recently in Philadelphia, was a new miniature automated inserting tool for high-speed installation of wire thread inserts.

Capable of driving up to 1200 inserts per hour, the new hopper feed and lightweight gun combination is designed specifically for automated assembly line operation in any type or size of material where higher loading strength and greater resistance to wear are required in tapped holes.

♦ DONALD J. NEARY has been named production manager of Bridgeport Thermostat Division, Robertshaw-Fulton Controls Company, according to an announcement by A. D. Rapuano, vice president of the controls firm and general manager of the Bridgeport division.

Mr. Neary has been assistant production manager since 1953. He joined the company in 1948. Previously he

was associated with Chance-Vought Division, United Aircraft Corporation, Stratford.

♦ C. C. HELMLE has been appointed vice president and general manager of Enthone, Inc. of New Haven, a subsidiary of American Smelting and Refining Company, according to an announcement made by Walter R. Meyer, Enthone president.

Mr. Helmle, prominent in the metal finishing industry for many years, was previously vice president and sales manager, and will continue as sales manager in addition to his new duties.

♦ THE FORMATION of Construction and Building Industries Educational Endeavors, Inc. with offices at 32 Elm St., New Haven, is described as the first concentrated effort to interest and assist engineering and architectural students.

The purpose of the foundation, known as CABIEE, is to find summer jobs in the construction business for Connecticut students in architecture and engineering students who express a desire to make a future in the construction and building fields.

The utility companies of the state have joined with the building industry in the inauguration of the project.

Chairman of the board of the corporation is Highway Commissioner Newman E. Argraves. Other officers are Joseph Mariani, president of the Mariani Construction Co., treasurer; Henry A. Pfisterer, professor of architectural engineering at Yale's School of Architecture, president; Calvin T. Hughes, vice president, Connecticut Light & Power Co., vice president; and Philip Paolella, vice president of Plasticrete Corp., vice president. Executive secretary and public relations director is Lee Leland.

♦ WILLIAM K. TATE, vice president-freight traffic, New York, New Haven and Hartford Railroad Company, retired recently because of ill health after more than forty-two years of service with The Nashville, Chattanooga & St. Louis Railway and the "New Haven."

Charles E. Ragland, formerly assistant vice president-freight traffic, has been named to succeed Mr. Tate.

♦ A TOTAL of 358 Connecticut firms employing 12,000 scientific and technical workers are listed in a "Directory of Industrial Research Laboratories in Connecticut" issued recently by the State Development Commission.

The 60-page directory, lists laboratories in three sections. One section includes the research divisions of manufacturing companies which not only

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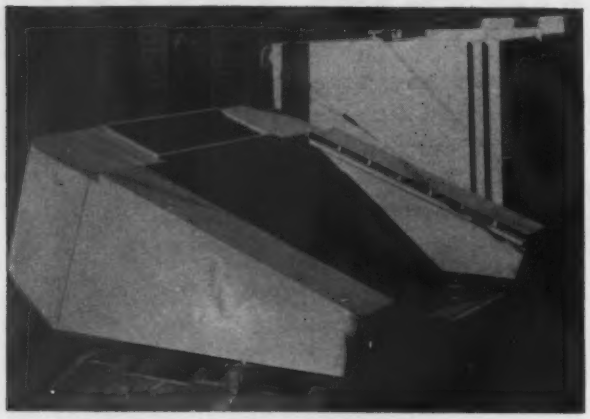

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conduct research as a part of their product development operations but also offer consultations or perform testing and analysis for outside organizations. Independent research laboratories and non-manufacturing organizations which offer these services are also included.

The second section of the directory includes the research divisions of manufacturing companies which limit their research to product development within their own organizations. Also listed with this group are the research operations of insurance companies and other non-manufacturing organizations.

In a third section are listed 10 Connecticut colleges and universities with their fields of specialization and laboratory facilities and the consulting services available to industry.

♦ CONTRACTS for the design and construction of a 36″ aperture telescope, to be carried to high altitude by unmanned balloon for photography of the planets and other celestial bodies, has been awarded to the Perkin-Elmer Corporation, Norwalk, by Princeton University.

The 36″ telescope program is a continuation of Project Stratoscope, directed by Professor Martin Schwarzschild, of Princeton's Department of Astronomy. According to Dr. Roderic M. Scott, a vice president of Perkin-Elmer, the 36″ telescope "can be considered a direct technical forerunner of satellite astronomy." He said the system will require a fineness of control which will surpass any previously made complex device, and that some of the techniques which must be perfected or developed for it will be needed for later astronomical work aboard satellites.

♦ THOMAS L. RACKLIFFE, son of Mr. and Mrs. Leslie G. Rackliffe, Plainville, has been awarded the Fafnir Bearing Company Science and Engineering Scholarship for 1959. His father, a machinist, has been employed at Fafnir 18 years.

The scholarship is awarded annually to the son or daughter of a Fafnir employee planning to study for a degree in science or engineering. Each scholarship is worth $1,000 and is renewable each college year provided the student maintains a satisfactory academic standing.

♦ A NEW Mansaver Barrel Grab that can be either suspended or used with a lift truck is now offered by Mansaver Industries, Inc., New Haven.

The grab has a solid back band but a split front band. The split front band has a cam lock which tightens the entire band around the drum that is being lifted. A handle on the side assists

in turning the drum and a locking band holds the load securely in a vertical position or at 45° below horizontal.

♦ THE A. W. HAYDON COMPANY of Waterbury has recently announced that a sub-miniature timing motor of their manufacture is in use in the Vanguard II satellite.

The motor was selected for use in Vanguard Project instrumentation since it weighed only two ounces. The motor drives the miniature tape recorder in the 21-inch satellite during the record period. The tape recorder is operating continuously while the satellite is over the sunlit side of the earth, charting the cloud and ground patterns around the world.

On command from certain monitoring stations, the information contained on the tape is fed back to earth, where photographic-type pictures can be produced from the information. By studying these pictures and analyzing weather patterns, it may soon be possible to greatly improve long-range weather forecasting.

♦ WATERBURY ROLLING MILLS, INC., Waterbury, manufacturer of phosphor bronze and nickel silver, has announced the appointment of Raymond C. Deschenes to the position of controller.

Mr. Deschenes was formerly a senior accountant with the Waterbury Office of Peat, Marwick, Mitchell and Company.

♦ FREDERICK GEISINGER, president of Nutmeg Chemical Company, New Haven, has announced the formation of a division of marketing. The division, which is known as the Motive Specialties Division, will promote the sale of two new items, Power-Pal Concentrated Diesel Fuel Conditioner and Power-Pal Plus 10 for gasoline engines.

Power-Pal Plus 10, a concentrated gasoline conditioner, is a scientifically compounded formula designed for use in all types of gasoline engines. It is claimed by users to have increased the gasoline mileage and to have improved the general efficiency of their vehicles.

Power-Pal Diesel Fuel Conditioner is designed for use in any type or size of diesel engine. It is specifically designed to keep clean and protect the fuel injection system.

♦ THE COST and time saving advantages of air operated chucking systems are fully described in Bulletin PO-66D which has just been published by The Cushman Chuck Company, Hartford.

In addition to illustrations and a complete listing of the line of standard Cushman air chucks and cylinders, considerable space has been devoted to a typical application with detailed installation procedure.

♦ CONNECTICUT'S industrial and residential builders, accustomed to steadily climbing costs of construction materials, saw a significant turn in the general price reduction just announced by Plasticrete Corporation, largest producer of masonry products in this state.

The announcement of price cuts ranging from 5% to 10% on sand and cinder concrete masonry bloc was issued from Plasticrete's headquarters in Hamden by Philip Paolella, executive vice president of the firm.

Explaining the general price reduction, Mr. Paolella emphasized that it was accomplished in the face of a continuing rise in costs of raw materials, hourly wage rates and freight. He credited the reductions to cumulative improvements in production and handling equipment and methods.

♦ HARRY T. SILVERMAN, president of the Plume & Atwood Mfg. Co., Thomaston, was awarded a certificate of merit by United Shareholders of America at the corporation's annual meeting.

James C. O'Hara, assistant vice president of the New York Trust Company, in making the award, noted that this was the first instance of a presentation to the president of such a modest sized company as Plume & Atwood.

The award was in recognition of the

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Thirty-eight of the 49 members of "Gallon Club" at the Chase Metal Works plant of Chase Brass & Copper Co., Waterbury, attended a luncheon given in their honor recently at the plant cafeteria. The annual two-day visit of the Red Cross Bloodmobile to the plant yields over 250 pints of blood. Each campaign is headed by representatives of labor and management.

exceptional accomplishments of Mr. Silverman in the fourteen months he had been president. These include a strengthening and stabilization of the company's financial position through an unprecedented increase in sales volume and through leadership and revitalization of a hard-hitting management team.

♦ HARRY AMTMANN has been appointed advertising and sales promotion manager of Stanley Hardware, division of The Stanley Works, New Britain. The announcement was made recently by John W. Bamert, general sales manager of the division.

Mr. Amtmann, who succeeds Samuel B. Wilder, was formerly advertising and publicity director of A. G. Spalding & Brothers, nationally known sporting goods manufacturer, with which he was associated for 20 years.

♦ VIRGINIA ANN CHARLOTTE, daughter of Mr. and Mrs. Donald A. Charlotte, Branford, has been awarded the $500 Rockbestos Scholarship Award for 1959-60, it has been announced by Albert S. Redway, president of Rockbestos Products Corporation, New Haven.

Miss Charlotte becomes the fifth winner of the award which has been made annually to a son or daughter of Rockbestos employees. The award is renewable for an additional three years for a total of $2,000 for the four years, provided application is made each year and certain qualifications are met.

♦ THE APPOINTMENT of Robert P. Hill as advertising and merchandising manager of Union Hardware-Sealand, Inc., Torrington, has been announced by Edward R. Speare, vice president-sales. In addition to advertising and merchandising duties Mr. Hill will develop special markets, export and government sales for all Union Hardware products—roller skates, ice skates, fishing rods and lines, and athletic shoes.

Prior to joining Union Hardware Mr. Hill had been with Polaroid Corporation for six years.

♦ THE R.S.V. ENGINEERING CO., INC. of Wethersfield, which has been sub-contracting nuclear reactor components for more than three years, has announced a substantial increase in its facilities in the nuclear field, which includes several latest type machines designed by the company.

According to Albert B. Schuster,

president, the decision to enlarge its Nuclear Division was made because the company's experience in quality control within the past year and a half has resulted in deviations of less than one-tenth of one percent from their nuclear reactor prime contractors, thereby making it possible for the company to maintain promised delivery schedules.

♦MISS BONNIE S. ANGUS, daughter of Mrs. Mabel V. W. Angus, North Canton, has been chosen as winner of the 1959 Ensign-Bickford Scholarship.

The winner was selected from a group of applicants who, under the terms of the plan, were sons and daughters of Ensign-Bickford or Darworth employees. The scholarship, was awarded for the full four years provided Miss Angus maintains a standing satisfactory to the college authorities.

♦ THE DIRECTORS of one of Connecticut's oldest firms, 102-year-old Rattan Manufacturing Company, New Haven, have elected a new chief executive and a new treasurer.

G. H. Keith Miller was named president and a director, and Miss Wilhelmina Spanagel was made treasurer and assistant secretary.

A manufacturer of electrical conduit fittings, Rattan distributes its products nationally and exports to several foreign countries.

♦ NINETY-TWO Connecticut towns are now included in "planning regions" designated by the Connecticut Development Commission, the agency reported recently in a 40-page report, "Progress Toward Regional Planning in Connecticut."

Planning regions are described as "clusters of individual municipalities so closely tied together by shopping practices, commuting habits, traffic flow and newspaper circulation that they constitute a single economic unit."

In addition to its factual report of progress, the new publication contains a number of graphic representations of the data used for making regional designations.

♦ DAVID E. POSTLE, former vice president-research, Mohawk Airlines, has joined The Kaman Aircraft Corporation, Bloomfield, to head the company's commercial sales division, concentrating on Rotodyne sales. Kaman Aircraft is the American licensee for the Rotodyne, developed by the Fairey Company Limited of Great Britain.

The Rotodyne can carry 48-65 passengers at 200 m.p.h. and combines the vertical take-off and landing ability of the helicopter with the fast cruising speed of the airplane. It is said to be

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♦ GORDON S. BURROUGHS, a pioneer in the early development of television and electronic systems and an authority on wage propagation measuring equipment, ranging and navigational devices and infra-red instrumentation, has been appointed vice president of the CBS Laboratories in charge of the newly expanded Military and Industrial Electronic Systems Department. The announcement was made by Dr. Peter C. Goldmark, president of CBS Laboratories, a Division of Columbia Broadcasting System, Inc., Stamford.

In his new position, Mr. Burroughs will direct a variety of projects which include military applications of television, high resolution reconnaissance and surveillance systems utilizing both visible and invisible radiation, and specialized instrumentation for measuring wave propagation. In addition, he will be active in the development of new types of computors, navigational training, mapping and plotting devices and infra-red equipment for military and commercial use.

♦A NEW TYPE wheel dresser called Spin-Kontrol, manufactured by Jarvis Corporation, Middletown, features a free-spinning wheel which is said to offer exceptional dressing ease, versatility, and control.

Spin-Kontrol is said to be particularly advantageous for use on diamond wheels because, by its spin-controlled crushing effect, it removes bonding material and exposes the diamonds without tearing them from the wheel which results in substantial savings in diamond wheel replacement costs.

Revolving instantly on contact, Spin-Kontrol makes it easy for the operator to form a radius on a grinding wheel quickly and to dress a wheel to a sharp angle without breaking it down along the edge. Flying chips, it is claimed, are held to a minimum—a safety feature.

♦ THE FIRST hydraulic pump to complete a 1,000-hour qualification test using a new fire-proof hydraulic fluid for jet transport hydraulic systems has been placed in production by Hamilton Standard, division of United Aircraft Corporation. Four of the pumps provide hydraulic power to actuate landing gear, flaps and other flight controls on the Convair 880, which uses the new fluid.

Several unique and severe tests were included in the endurance run. In one of these the pump inlet was left open to the atmosphere to demonstrate continued operation of the unit with air entrained in the fluid. The pump was operated successfully for a total of over 60 hours under conditions simulating complete failure of the pressurizing equipment needed to force fluid into the pump at high altitudes.

♦ C & S FORCE CALIBRATORS, with guaranteed accuracies of 1/20

Jarvis Corporation's new type wheel dresser called Spin-Kontrol is furnished with three wheels, one each for dressing Diamond Wheels, Coarse Grit Wheels and Fine Grit Wheels. The set also enclosed an Allen Wrench and a Drift Pin.

of 1%, and single cell weighing kits guaranteed to 1/10 of 1%, are available for fast on-the-spot calibration of testing machines, thrust stands, and conventional load measuring and weighing devices, and for general single-point weighing operations.

Produced by Revere Corporation of America, Wallingford, both of these units are direct reading instruments, with no corrections or conversions required. Each type of kit is completely packaged in a single waterproof case weighing approximately 50 pounds and containing all required adapters and instrumentation for field use.

♦ A NEW and improved industrial gun, designed to smash down clinker build-ups and balls in rotary kilns used in cement, lime and refractories manufacturing, has been introduced by Remington Arms Company, Inc., Bridgeport.

Using the Remington Model 401 Industrial Gun, one man can fire a few well-placed, high impact slugs into troublesome kiln formations and remove them while the kiln is still hot. Without such a gun, operators are compelled to shut down for long and costly periods while the kilns cool sufficiently to permit hammer crews to attack the build-ups.

According to the company the Model 401 offers lighter construction and recoil action that make for easier handling in the kiln room. Aluminum alloy elevating and traversing wheels and 10-coil recoil springs for stable action are also features of the new gun.

♦ THE FIRST assembly line for automatic sorting and reading machines is in production at Pitney-Bowes, Inc., Stamford, the postage meter and business machines company has announced.

The sorter-readers, developed in cooperation with the National Cash Register Co., will sort checks and other documents at high speeds. The original machines, with General Electric reading electronics, are being used by the Bank of America, but later models also will be used by other banks and business organizations for paper sorting and reading.

Pitfalls Described in 10% Sampling

(Continued from page 16)

nies using this plan are staffed by personnel who are not cognizant of the principle. Their inspection program can be easily made ineffective by production departments and vendors who submit small lots or by Purchasing personnel who order small lots. Such companies should immediately discontinue such practice and adopt sampling plans that will discriminate between

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lots on the basis of quality regardless of lot size.

It is interesting to note that company executives did not know that the 10% sampling plan was used by inspection personnel. None of them were aware of its deficiencies as a method of inspection. In every instance the plan was authorized by an inspection foreman who had used the plan for many years and who did not understand the nature of the sampling risks inherent in the plan. In all these companies the number of customer complaints had been sufficient to require a review of the inspection program. In every company the excessive number of failures to reject discrepant material had initially been assumed to be the result of questionable integrity and diligence of inspectors. The choice of the sampling plan was subsequently proven to be responsible for a large percentage of such failures.

The findings indicate that inspection supervisory personnel must be trained to understand the principles upon which the sampling plans are based if they are also to have the authority to select sampling plans. They also indicate that manufacturing executives cannot remain indifferent to the basis upon which such authority is delegated.

Scovill in New Milford

(Continued from page 11)

was acquired for the erection of its new 293,000 square foot tube mill.

The new mill, representing an investment "in the future" of approximately $10,000,000, presents an imposing exterior with its aluminum siding, rising to a height of 42 feet and stretching out to 1150 feet in length, 368 feet in width at the delivery end and 208 feet at the other end. Inside it is structurally divided into three bays, which run the length of the building. It is so large that an interior railroad siding containing three railroad cars appear dwarfed at one end of the building.

The three bays are served by 10 ton overhead cranes that can lift the tubes, some as long as 200 feet, to a height of 28 feet while transporting them the entire length of the building.

By starting from scratch in the new location, ever mindful of past problems, Scovill engineers were able, through working with engineers from the suppliers of equipment, to develop many innovations in the field of automation.

Opening Ceremonies

On hand for the opening ceremonies were Lieutenant Governor John Dempsey, Mayor Raymond E. Synder of Waterbury, New Milford and Scovill officials.

Among his brief opening remarks prior to introducing Lieutenant Governor Dempsey, who congratulated Scovill for its continuing faith in the state and welcomed the assembled visitors, President Selden T. Williams observed, "The brass-box cornerstone was laid at this site exactly two years ago. I need hardly say that we are proud of the job that has been done here since May 7, 1957. It represents an important advance in production facilities for products which will serve practically every home and industry in the United States. We have built here an important and desirable addition to the resources of our community and our state.

"Technically . . . and as you will see on your tour . . . these new mills can be numbered among the most advanced facilities of their kind in the world. Every effort has been made to make this a good place to work, with many features for the comfort of our people. In addition, we have the advantage of a beautiful surrounding country-side . . . which we have taken particular pains not to impair. We take pride in the fact that we have become fellow residents in a friendly community and look forward to playing our part in its future civic well being. We are happy to do this in the fine old State of Connecticut."

Highlights of Plant Tour

Upon the completion of the ceremonies the machinery was set in motion by the pressing of a button by Lieutenant Governor Dempsey, and the guests started their tour of the plant in small groups accompanied by Scovill officials and other company representatives acting as guides.

Among the operations seen by guests during the one and a half hour tour were:

1. Heating and piercing of copper billets heated to a plastic consistency;
2. Cleaning of tubes in tanks of sulphuric acid;
3. Pointing of tubes to permit gripping by jaws on the draw benches;
4. Drawing of tubes one or several times to the desired inside and outside diameters;
5. Annealing, sawing to desired length, testing, inspection, packaging and weighing.

The production of brass tubing follows a similar process, except that the operations start from brass tube shells produced by the hot extrusion process at Scovill's Waterbury plant instead of the New Milford plant.

Some interesting features of the new plant are the only twin reversible type bay transfer conveyors in existence.

The conveyors can move up to 50,000 pounds of tube at a time in either direction; the newest and one of the longest multiple position draw benches, capable of drawing up to 200 feet of copper tube at one time in straight lengths, and five of these at once; and the Scovill engineering concept tube elevators beside the drawbenches to raise large quantities of tube either to be sent further in processing or to be redrawn at the same bench.

Other features are ultra modern annealing equipment to maintain close control of quality, original designing of the pickling tanks in which the acid solution is forced through and around the tubing to assure cleaning inside and outside of the tube at the same time and evenly, eliminating the former problem of air bubbles inside the tubes that prevented even cleaning; original design of an automatic feeding mechanism for the heavy duty rotary tube pointing machines eliminates exhausting manual labor formerly required. It is two or three times as fast as the manual method. Another feature of significance is the waste treatment plant. Scovill uses water directly from the nearby river in order to mix into acid solutions. Before returning the water to the river the treatment plant cleans and treats the solutions to meet the requirements of the State Water Commission.

Following the tour guests were entertained by Scovill officials at a luncheon held at Greenlawn restaurant some two miles from the plant. Chauncey P. Goss, general manager of the Mills Division and vice president of Scovill, acted as moderator during a brief program featuring introductory remarks and introduction of Scovill officials by Mr. Goss, a short talk by President Selden T. Williams and a brief question and answer period. Press kits were given to press representatives and all guests received descriptive literature about the New Milford Tube mill and a bottle of cologne packaged in an artistic spray-type container produced by Scovill.

In his remarks President Williams gave credit to Kenneth T. Howell, advertising manager, for his masterful planning of the day's program and then went on to say:

"Scovill people take great pride in the fact that, down through the years, they have retained this pioneer approach to problems throughout their activities. As a result, many of the Industry's most important technical advances were first applied commercially in the Scovill Mills.

"Examples are to be found in our introduction of large-scale continuous casting; the building of the first and largest cold-rolling continuous strip mill integrated with the continuous bar casting machine; our new techniques in precision rolling of Aluminum Sheet and many others, each an important step ahead of current commercial practice at the time.

"The Tube Mills you saw this morning again prove that Scovill people are looking to the future, proud of their heritage as master craftsmen in metals, proud of the important part they have played in establishing the State of Connecticut as the world-famous center of the Brass Industry. We are working hard every day to deserve to continue.

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How Would You Decide?

By Fredrick H. Waterhouse
Counsel

Can the company insist that an employee use normal incentive speed to achieve incentive earnings?

Here's what happened.

The jobs involved in this arbitration were properly studied and an incentive rate set, which has never been protested by anyone. The union contract calls for payment of at least the day work rate regardless of the amount of production. Although the incentive rate was a real incentive when originally set, the employee in question has received a number of increases in his day rate so that now the difference between his day rate and what he might earn if he applied himself under the incentive program is too small for him to expand that effort. Consequently his production has fallen considerably below the production standard set by the company. The company claims that it has a right to demand that all employees meet a production standard on all job assignments. Therefore, it gave the grievant a warning notice that he was not meeting proper production standards. The union protested the issuance of this warning and claimed the company has no right to discipline an incentive employee who gives only normal effort on an incentive job. It agrees that he could have produced at a higher rate, but argues that because over the years increases in the day work rate have made the incentive rate unrealistic, the employee can set his own pace and if he fails to reach the incentive rate his only penalty is a minor loss in earnings.

Can the employee set his own pace or can he be required to attain production standards?

The arbitration board stated that the company had the right to expect the employee to produce in proportion to the guaranteed amount of his day rate, but since the incentive rate had lost its appeal to this employee and the company had not promulgated any policies on rules as to productivity, the company was not justified in issuing the warning notice.

Is a matter necessarily arbitrable if it touches upon any point of the union contract?

Here's what happened.

The company decided to reduce the number of utility men on a certain job and the union complained. There was nothing in the contract requiring any utility men. However, the union claimed that the absence of utility men caused work to pile up when the regular employees left the production line for personal reasons and therefore it was a "condition of employment" under the contract and so was arbitrable. Calling on all the arguments available to support arbitrability the union's principal claim appeared to be that any matter is arbitrable which touches upon any part of the union contract, and so any claim arising under the contract is arbitrable. The company claimed that the assignment of the work force was strictly a management function and in the absence of any contract provision restricting that right it could assign or transfer employees as it deemed best.

Must a grievance be related to the contract or is it arbitrable if it is merely a complaint with no specific provision or clause touching on the subject?

The arbitrator thought the union claim amounted to the thesis that the right to bring an issue before an arbitrator was equivalent to the conclusion that the issue is arbitrable. He rejected that theory and stated that one of an arbitrator's functions is to resolve the question of arbitrability, and that an issue does not become arbitrable simply because one of the parties thinks it is arbitrable. Regarding the present grievance the arbitrator ruled that it is fundamentally concerned with the problem of organizing and directing the work force, and the union is not free under the contract to enter that domain, so the issue is not arbitrable.

To what extent is the company bound by information on a "bid form" in making promotions?

Here's what happened.

The Contract provided that in job posting for promotions "Only information given by the employee on the bid form will be considered at the time of selection." When a junior employee was promoted, the senior employee

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filed a grievance claiming he should have received the promotion. The foreman admitted that his appraisal of the two employees was based only on his observation of the men while they were working and not on their records as set out in the bid forms.

Must the foreman limit his inquiry of comparative ability to facts stated in the bid form?

The arbitrator reluctantly admitted that the junior applicant was the best man for the job, but ruled that the foreman had not followed the restrictions in the contract regarding use of information in the bid form. He then ordered the senior employee, the grievant, installed in the job in place of the junior employee.

Handmaiden To American Troubadors

(Continued from page 9)

The "heart" of a piano lies in its tonal quality inherent in its formation, created by an intricate, precise, highly sensitive, well-coordinated combination of metal, wood, leather, wool and human skill. Sitting at an "upright," which today has been modified and called spinet or vertical, and pressing one key puts into operation the many parts of the triple-jointed maze-like hammer action striking against the string. There are 88 keys and 88 individual piano actions all combined and integrated into the full scale.

The wire strings are cross-strung in two separate layers on a one-piece cast iron plate bolted to the sounding board. The strings, metal plate, sounding board and wood framing supports form a near-square one piece metal-wood block about four inches thick extending a few inches from the floor to the top of the "upright." This block covers the whole back area and a large inside portion of the piano. This block and the hammer action form the "body and heart" of your piano; everything else is a shell or "furniture."

There are about 220 strings tightly strung from the wrest, or tuning pin area, on top of the block, to the anchor pins at the bottom. As the strings extend downward they rest on a small wooden bridge near the lower end. The strings' "speaking length" is the area from the tuning pin to the bridge. The bridge sits on the sounding board. The sounding board is five sixteenths of an inch thick and covers the entire block area. It is made of especially selected and treated spruce.

By pressing a key, the felt hammer strikes a note or string (treble notes have three strings) and the sound is transmitted by the string's vibrations to the wooden bridge and from there through the sounding board. This occurs at the speed of approximately 440 cycles (vibrations) per second. The music you hear comes largely from the spruce sounding board which amplifies each note.

Each hammer action is accompanied by a combined damper movement—a small felt pillow presses against the string after it has been struck stopping the vibration. This prevents continuous vibrations or sound from the many struck strings which otherwise would produce a pell-mell musical conglomeration. The springs, pins, damper bars, bearing bars—the 700 metal pieces—manufactured by Cornwall & Patterson must be precise, have the correct tension and withstand much abuse.

From 1944 to 1954 Cornwall & Patterson expanded its plant with four new additions and began manufacturing mechanics' hand tools, screwdriver blades, power-bit inserts, metal pins for luggage, hardware, aerosol dispensers, cigarette lighters, spade bolts for electronic equipment, and many other items. During the past two years, since Preston I. Carnes became General Manager, the Company has branched out to serve a variety of new markets.

This has come about through intensive research, through the efforts of Mr. Carnes, Richard Kelley, Sales Manager and the Jack Barnes Engineering Company of Thompsonville, Connecticut, which is developing new tooling procedures. Cornwall & Patterson remains the handmaiden of our most basic musical instrument but is also looking ahead to new developments and new markets in our ever-expanding technological frontier which plays such a vital part in our continuing American drama.

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Public Relations

By Charles E. Reiche
Public Relations Director

"Backward ran sentences until reeled the mind."

♦ "BACKWARD RAN sentences until reeled the mind."

This gem is one of dozens like it in the profile-parody of Time Magazine written by the late and talented Wolcott Gibbs some twenty-odd years ago in the New Yorker. Gibbs concluded his devastating series of articles on the news magazine by writing "Where it will all end, knows God."

Gibbs, of course, when he went to work on Time-style of the 1920s and 1930s was shooting at a sitting duck. Possibly never in the history of written English, or mangled English, has there been a publication so vulnerable as Time to the attacks of people who believe in non-fractured syntax. For too many years its prose style was arch, contrived and ridden with overpoweringly ridiculous word transpositions and pseudo-erudite allusions. Time-style is more mellow today and is a reasonable image of the way most people write and speak.

Its major fault right from the start was that it *was* contrived. In the first rosy years of the magazine's success, Time-style intrigued people—and often made them laugh, both with and at—but they soon tired of it and Time began to publish its facts and fables in more acceptable, i.e. better-wearing, English.

Style, to be effective, must not intrude on what it is a writer or speaker has to say. It must use the language, not abuse it. It isn't easy to pin style down, and it certainly isn't easy to teach anyone what it is or how to develop it. This truism, however, doesn't make style per se any less important than it really is; which is indeed very important.

It might be well to digress briefly at this point and answer the question "What does style in writing and speaking have to do with public relations?" The answer, just on the odd chance there are backward readers among us, is this: Communication is one of the major functions of public relations; if we can communicate only in muddy terms and garbled grammar, we loose one of our most effective weapons. Next question.

Good writing style, to repeat, is style of which the reader is only vaguely aware. The cumulative goodness of the style does not intrude itself on the reader's consciousness until he has finished reading. You know style is bad when you are continually conscious of it. Thus the aim of anyone who has to write something should be to write it . . . a letter, an interoffice memo, or whatever . . . so that it communicates without forcing the reader into a state of annoyance or admiration over the choice of words or the syntax.

Writing style in particular *can* be developed; it is not an arcane intangible shrouded in mist but a specific reality which we need to express ourselves so that others can understand us.

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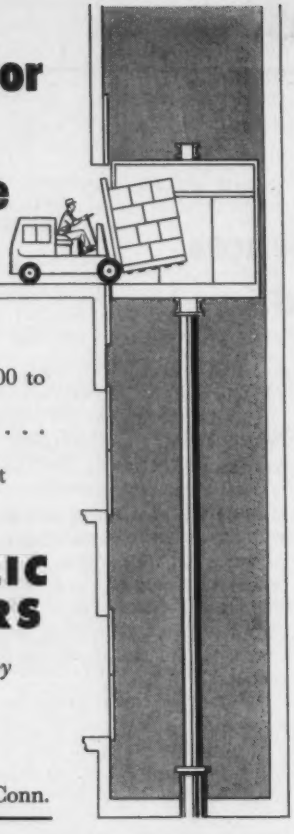

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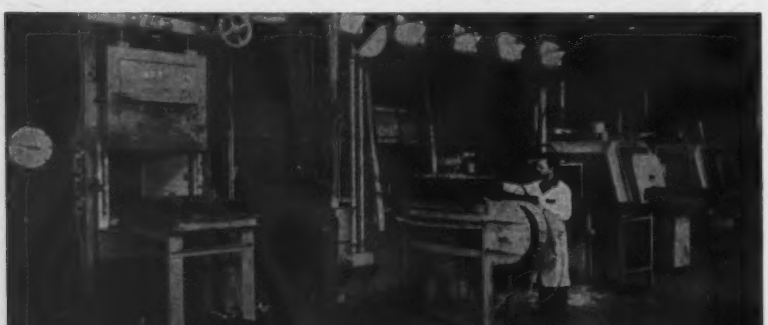

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We must start off in our search for style with a bow to long-acknowledged verities: i.e. style should be natural, it should be simple and it should be direct.

When we say it must be natural we mean that it must conform in general to the language in which the writer normally thinks and speaks.

When we say it must be simple we mean that it must communicate an idea or series of ideas in a form which most people can understand readily.

When we say it must be direct we mean it must take a reader from Point A to Point B and beyond in a manner which leaves nothing to be desired as to how the reader got from one point to the next. In other words, it expresses an idea of the writer so that we know precisely what it is the writer wants us to know.

Style is the essence of communication, and the essence of good style is the triumvirate of naturalness, simplicity and directness. The hard work for most of us comes when we try to pin down and capture these three virtues.

In the first place, it is implicit that we know the rules of our English grammar, at least in a basic way. Second, we must know words and respect them, which is not to say, however, that we must fear them. Far from fearing them we must regard them as treasured allies. Third, we must avoid the curse of imitation. Fourth, we must not confuse simplicity with starkness. Much of our greatest prose is simple prose and movingly beautiful. But it isn't drab. Further, we must not confuse simplicity with directness; simplicity lies in our *choice* of words while directness lies in our *use* of them, the way we string them together.

If we have only hazy ideas about our words and what they mean and if our grammar cracks up in our hands, what results will be not so much style as unmitigated claptrap. Thus when we approach the problem of developing a writing style we must be sure we know something about our tools: words and grammar.

In public relations it is imperative that we be able to communicate so that all our targets know what we are talking about every time we speak. Further, we must make every effort we can to get other members of management to understand the need for succinct communication and, to the extent it is needed and the extent we are allowed to do it, we must go all out to make the written words of management clear to employes, share owners, our communities or to whichever of our publics it is we are addressing.

Business Tips

By HARRY D. KERRIGAN, Professor of Accounting
School of Business Administration, University of Connecticut

Part II. Principles of Accounting

♦ IN this two-part series, we turn from a consideration of the nature of accounting principles, i.e., accounting concepts, conventions, or standards, as discussed in this department in the June issue, to the following questions. Are these "principles" matters of unanimous support among accountants In instances of disputes or differences of opinion among accountants, would it be desirable to have an "accounting court" before which contending parties could argue and then be guided by the judgment of the Court?

Unanimity among accountants. There is considerable unanimity among accountants, but it is almost entirely confined to the "general acceptance" of specific methods. What makes this situation disturbing is that there are often alternative methods of treating, say, a given type of transaction. The large fact is that the body of generally accepted methods has developed on the basis of piecemeal judgment of specific transactions, conditions, or events. Unanimity among accountants—as expressed in the standard audit certificate with words"in conformity with generally accepted principles . . ."—is accordingly in the nature of mutually accepted methods that have become established, not by a process of reasoning from central premises or postulates, but by a process of piecemeal experience with problems as they arose in practice.

The effect is to leave room for much difference of opinion as to the suitability of any specific method to a given situation relating to a particular time, place or condition. The element of unanimity, in consequence, tends to fade into nonexistence at the point where it matters most, i.e., at the point of application of methods to transactions, events or conditions.

And so it is that writer Stephen Gilman in his provocative book was moved to say: "The significance of periodic accounting profit is . . . the algebraic sum of the separate significances of the various conventions, doctrines, rules, and practices . . (of a) particular time . . . "*

Gilman's gloomy view is shared by John B. Canning who wrote: "What is set out as a measure of net income can never be supposed to be a fact in any sense at all except that it is the figure that results when the accountant has finished applying the procedure which he adopts."**

Role of an Accounting Court. The way to reduce needless, confusing, and possibly misleading variations of method—even though all of such methods belong to a body of "generally accepted" concepts, conventions or standards—is to relate them to central premises or postulates, and to discard those that are not compatible. Formulation of central premises or postulates of accounting is a long-term, uphill struggle that must compose natural conflicts of important interests, namely, the interests of the investing public, consuming public, business management, stockholders, and organized labor. Eventually, we will have a systematic body of theory underlying practice. The speed with which this will be realized, however, is clouded by the absence so far of any substantial evidence of real conviction on the part of the majority of professional accountants that "the thing" is feasible, and, equally, by the pre-occupation of accounting academicians with training the next generation of accountants in methodology currently in vogue.

An interesting proposal—as yet with no wide following, but possessing a potential of tremendous importance—is the idea of an "accounting court". We have here a device that could contribute materially to the building of a systematic body of accounting theory. The principal advocate of an Accounting Court, a prominent public accountant, has the following to say in demonstrating the need for such a Court, reflecting, no doubt, his cumulative practical experience extending over many years: I. " . . . in giving the standard . . . (audit) certificate, we have a choice of . . . (methods) applicable to the same . . . (type of) transactions, and . . . each choice can be certified . . . even though the profits reported would vary widely, depending on which . . . (method) was chosen . . ."*** II. ". . . because of the way the certificate is worded, the accountant does not necessarily feel, nor is he necessarily of the opinion, that the . . . (methods) followed are the proper or preferable ones in any given instance . . . He is not required to express his opinion on the applicability of alternative . . . (methods), and he does not and need not take any responsibility for his choice. In fact, he will often certify statements which reflect identical transactions in different companies, recorded in widely different ways and with . . . (significant) differences in the results obtained . . . (as long as) the alternative . . . (methods) are all classified as 'generally accepted' ".*** III. "Where alternative . . . (meth-

(Continued on page 42)

*Accounting Concepts of Profit, p. 605
**The Economics of Accountancy, p. 98

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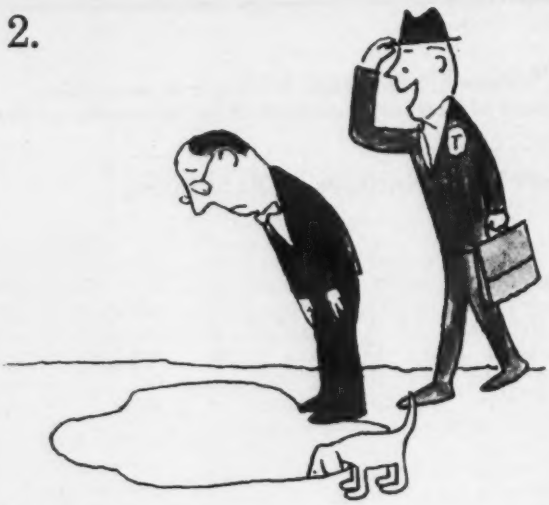

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Accounting Hints

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Accounts Payable – Use of Burroughs Sensimatic Bookkeeping Machine as Peripheral Equipment to IBM "650" Computer

By EUGENE J. WHITE, Assistant Comptroller

The Kaman Aircraft Corporation, Bloomfield, Conn.

♦ THE problem of internal control in regards to accounts payable arose at Kaman Aircraft with the increase in sales from $14,500,000 in 1955 to $21,000,000 in 1958, with anticipated sales in 1959 possibly 35% to 40% above 1958.

As a result, we, in the Finance Department, initiated a survey in regard to the various records and procedures of the Accounting Department in relation to the "650" computer. The Accounts Payable Department was one of the first departments surveyed due to the sizable increase in volume we had already experienced.

The Accounts Payable function was first programmed on the basis of use of the computer. It was at this point, however, that with the estimated cost per hour of operating the computer, the idea of using a peripheral bookkeeping machine tied in with an IBM key punch was investigated. It became apparent that with all the accounting information necessary to be put into the computer system, that the method of input, mainly key punch, was going to become a sizable problem. At the same time, we knew that if the Accounts Payable Department was to operate efficiently and satisfactorily with our increased business, that their methods and procedures, as well as the records maintained, must be changed.

After a prolonged study of the Accounts Payable Department, it was decided that we would incorporate the use of such peripheral equipment in conjunction with the computer for the following reasons: (1) the cost would be less; (2) the Accounts Payable Department could generate records previously not available, and at the same time automatically produce a punched card for input to the computer; (3) daily information could be generated for internal control purposes instantaneously as the paperwork was processed; (4) put the Accounts Payable Department back in the accounts payable business.

Before describing the changes and new systems installed, the following is a brief description of the system used prior to the change.

One of the peculiarities of governmental accounting in regard to prime contracts is that all charges to contract costs on the part of purchases, must be fully documented with receiving reports, necessary inspection reports, etc. before such costs can be charged to a government contract. Also, in the case of building helicopters, the quality of the parts and materials received is extremely critical and as a result, in most cases, no payment is made until the final inspection of the parts or materials has been received.

The old system was essentially an individual purchase order system. By this, I mean that each individual purchase order was controlled in regard to payment, receipt, and inspection, by itself. The only record maintained was the purchase order itself with the proper notations on the purchase order for partial payments and receipts. This meant that the paperwork would flow from a receiving clerk to a matching file where it was held until all the proper documentation was received, and then to a coding clerk, to a checking clerk, and then the voucher was set up for payment. The department also maintained an outstanding commitment record by contract for each vendor, and controlled the cash disbursements based upon the due dates. All of this was done in conjunction with an IBM "604" calculator. Purchase order was controlled in regard and sent to the tab department for incorporation into the commitment system. Invoices were not submitted to the tab department until they had been properly documented, vouchered, and approved for payment. The tab department would then come back on a monthly basis with an outstanding commitment report as mentioned, as well as the various voucher register analyses. As can be seen, there was quite a gap in time between receipt of an invoice and such time as it was entered into the system. This operated satisfactorily in prior years due to the

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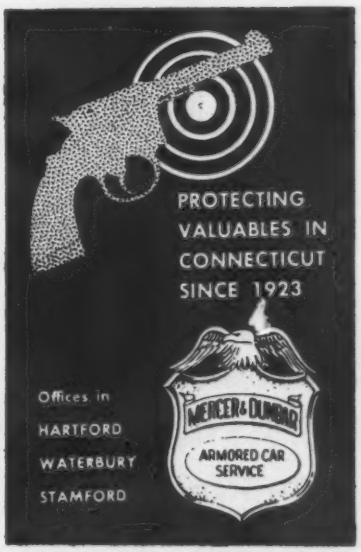

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fact that the volume of business was such that it could be controlled within the department. However, with the advent of new business increasing the volume of vouchers close to 5,000 a month as well as receiving approximately 1200 to 1300 invoices a week, this internal flow and control of paperwork within the department could not be continued. With the current competitiveness of government business, it became necessary that we have control of the paperwork within the department so that contract information could be available sooner and that questions with vendors and the Purchasing Department could be answered more readily with less expediting. As a result, the following new system was initiated.

Individual vendor ledger cards were established containing the following information: date; purchase order number; supplement number; purchase order amount; voucher number; paid amount; due date; check number; commitment balance; total payments for the period; total business with the vendor for the period. A code was also inserted for large and small business. At the same time, an addressograph plate was made showing the name and address of the vendor and attached to the corner of the vendor ledger card. This plate is used for addressing the checks.

The following is a brief description of the flow of paperwork through the foregoing ledger card at the same time creating the input for the computer and generating various byproduct records.

Purchase Orders

Upon receipt of purchase orders, they are properly coded and presented to the Burroughs Sensimatic with the applicable vendor ledger cards. In the machine processing, the vendor card is updated recording the receipt of the new purchase order and it is also posted to a contract commitment ledger card. At the same time, a punch card is also produced with all of the pertinent data necessary for the computer center in the processing of the detail commitment report, as well as a purchase order journal for the day's activity.

Receiving Reports, Rejection Reports, Shipping Orders

All of these documents upon receipt are directed to a matching file for matching with the applicable purchase orders.

Vendor's Invoices

All vendor's invoices are checked upon receipt and then directed to the matching file where they are correlated with the proper purchase order, receiving reports, etc. If there is any variance in paperwork at this point it is determined whether it falls within company policy. If it is within company policy it is processed further, or the proper debit memos are prepared. At this point, the voucher package is prepared, checked and approved by an auditor, and directed to the bookkeeping machine. In the processing of the voucher through the bookkeeping machine, the following is performed: (1) the vendor ledger card is updated listing the voucher number, paid amount, and due date. This, in turn, reduces the outstanding commitment balance and increases the amount paid to the vendor for the period; (2) The check is prepared by the machine; (3) The contract commitment ledger card is posted, reducing same; (4) a punch card is created with all the detail pertinent data required for voucher register analyses; (5) Another duplicate punch card of the check is also prepared. This duplicate check card will be used at a later date for reconciliation of the bank account, as well as detail listing of cash disbursements on the due date.

Another byproduct is also created at this time which is the daily voucher register and check register. After the vouchers have been processed through the machine, the address plate which has been previously described and which is attached to the vendor ledger card, is inserted in a simple addressograph machine along with the check. This prints the name and address of the vendor. The checks are then filed by due date in the ready to pay file, and the vendor ledger cards are refiled. The vouchers are sent to the Audit Department where all the pertinent documents are stamped paid for control purposes.

Each day, the tab department will sort out all the duplicate check cards punched as being that due date. These will be listed in detail and sent to the Accounts Payable Department with a copy to the Internal Audit Department. The duplicate check cards are also sent to the Audit Department where they are controlled for bank reconciliation purposes as well as proper internal control. The checks in the ready to pay file are then checked by the Accounts Payable Department to the tab listing. These are then sent to the Audit Department for rechecking and approval. It is at this point that the checks are sent to an independent section for the proper signature by machine of the checks, logging the check numbers and mailing to the vendors.

As can be seen from the foregoing brief description, many of the records heretofore not available are made available on a daily basis for use by the payables department as well as for internal cost control purposes.

Business Pattern

A comprehensive summary of the ups and downs of industrial activity in Connecticut for the thirty day period ending on the 15th day of the second previous month.

Connecticut Slower Than Nation In Recovery

♦ THE Connecticut Index of Industrial Activity rose only 1/10 of one percent in April to 3.8% below trend. Although there have been gains in the economy of this State, the standing in relation to the long term growth trend has changed very little during the last three months.

The U.S. Index has advanced sharply since the beginning of the year to register an estimated 8% above trend in April. A major factor in the National upswing has been the high rate of steel production.

Manufacturing employment in Connecticut thinned in April as a result of continued weakness in the transportation equipment industry. Moreover, electric power sales fell off because of strikes in 2 important manufacturing industries.

Conversely, average hours worked per week showed a significant rise, while construction employment moved up slightly.

Earnings and Hours

Average weekly earnings for factory workers in both Connecticut and the U.S. moved to new record highs in April.

In this State, earnings reached $91.21 as hourly wages maintained the March level of $2.23 while the workweek lengthened by 4/10 of an hour to 40.9.

Nationally, weekly earnings were $89.87. The rise was due to improved hourly wages and a longer workweek. Hourly wages across the country now average exactly the same as in this State. However, our workweek was 6/10 of an hour longer than the Nation's average of 40.3.

For the country as a whole, all of the gains over March totals occurred in the durable goods industries.

Gross National Product

The total value of all goods and services produced in the first three months of this year moved to an all time high of $467 billion—up $14 billion from the previous record level reached in the 4th quarter of 1958.

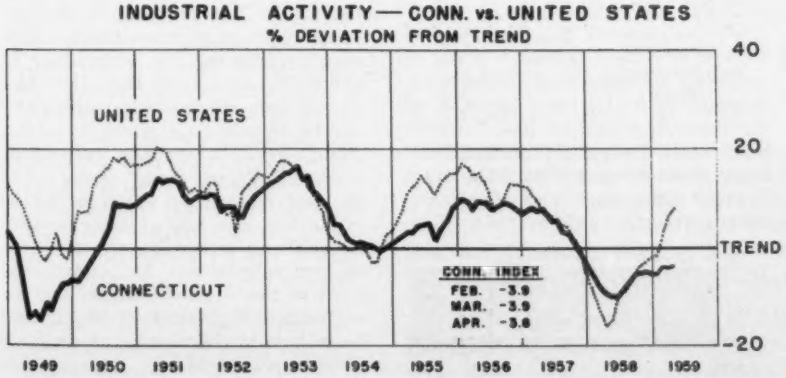
Inventory buildup, in anticipation of a steel strike, accounted for the largest share of the current rise in gross national product. The Commerce Department reported that accumulations in that area amounted to nearly $6 billion. Increased consumer purchasing and housing construction outlays were the other major contributors.

At present, output is at a point nearly 10% above the recession low of $427 billion reached in the 1st quarter of 1958.

Estimates for the current quarter indicate a figure of $475 billion. Increases are also forecast for the last two quarters, but the threat of a steel strike has held the third quarter estimate to only a small gain. By year end, gross national product is expected to approach $490 billion, giving a record $475 billion value to the year as a whole.

Prices

During the past 12 months both



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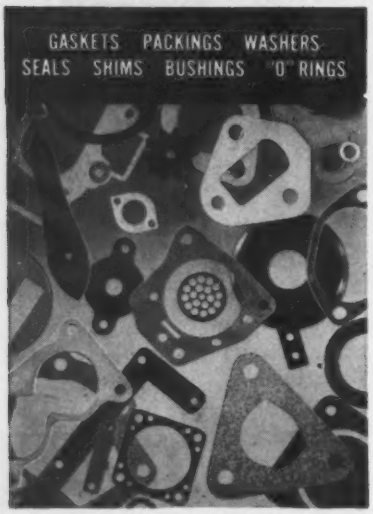

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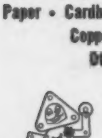
Paper • Cardboard • Plastics • Brass • Steel
Copper • Aluminum • Kel-F
Other Special Materials



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New York, N. Y.; Rochester, N. Y.; Detroit, Mich.; Chicago, Ill.; Minneapolis, Minn.; Pittsburgh, Pa.; Cincinnati, Ohio; Ridgewood, N. J.; Atlanta, Ga.; Memphis, Tenn.; St. Louis, Mo.; Camden, N. J.; Washington, D. C.

the consumer and wholesale price indexes have held remarkably level. Consumer's prices have increased only 0.3% while wholesale prices are up just 0.6% from a year ago.

The rising trend of the consumer price index during the early part of the recession can be traced to rapidly rising food prices caused by severe weather curtailing supplies. However, more recently, food prices have been falling steadily. This decline has offset the continuing rise in the cost of services. As food prices show little likelihood of increasing in the face of plentiful supplies, the consumer price index probably will record only a minor rise in the months ahead.

The wholesale price index has shown a similar pattern. Farm produce prices reached a peak last March. Since then, the improving supply situation coupled with relative steadiness in the prices of processed foods have held the index at a fairly steady level. Prices for all other commodities, as a group, have been on the rise for 10 months. The index recently has been moving up slowly and appears likely to continue at this pace.

Labor Turnover

Hirings in nine of the last ten months have been above the separations rate. As a result manufacturing employment had increased through March by nearly 16,000 workers. While April factory employment reflected a slight drop, turnover figures, when available, are not expected to show any wide shift from recent trends.

Business Tips

(Continued from page 37)

ods) are available, it is the client that makes the choice . . . (the public accountant) is not required to have a preference as long as the alternative . . . (methods) are all generally accepted . . . in 99 out of 100 cases . . . (today) the procedure that the client wants to follow . . . (is the procedure that would show a higher profit) . . . " ***

The language of this distinguished accountant is hard indeed. It is not so much an indictment of accountants, however, as it is a sober appraisal of the times in which we live. There is little doubt that if accountants were left to themselves, they would produce financial statements with objectivity, informativeness, and accuracy. The truth is that their position is greatly affected by the pressures that surround them inside and outside the client's organization. Finding themselves in a social complex of differing interests, they have moved farther and farther away from premises and postulates leaving larger and larger gaps between such basic thinking and approved methodology.

An accounting Court as envisaged by the author of the foregoing quotations would have the following major features. It would be established by professional accountants themselves, probably by the present, official organization of public accountants, The American Institute of Certified Public Accountants. This organization would finance the Court, appoint or elect the judges (suggested to be three in number), give the judges tenure of office to age of retirement, and allow them full and independent freedom of decision. The Court would normally hear cases after a preliminary airing of issues before a committee of the "Institute." Upon petition of one of the parties "at interest," the committee would determine the issues in a particular case, and docket it for presentation to the Court. Dates for briefs and arguments before the Court would be announced in advance. Any interested party could appear before the Court, but it is anticipated that the caseload would be largely borne by members of the "Institute." Decisions of the Court would be published together with the briefs and arguments presented to the Court in each case. Copies of all materials bearing on a case would be sold at cost to any one interested in acquiring them.

The idea of an Accounting Court has undoubted merit. Accountants would have a tribunal of their own. It would be a professional tribunal which could resolve unsettled questions, decide disputes between accountants, and hand down findings of the best thinking in the field. Such a Court could bring about the discard of obsolete methods with a promptness not now obtainable. New methods appropriate to new conditions would have a chance for quicker acceptance if sanctioned by the Court. The existence of a Court would also exercise a salutary influence in reducing the multiplicity of alternative accounting methods which even though generally acceptable could not be equally appropriate in all circumstances to which they purportedly apply. Finally, we would see the use of the case method by which would be available a new and growing body of materials on accounting for the guidance of practitioners, for research and study by teachers and students, and for cognizance of government officials and lawmakers in the pursuit of their respective responsibilities.

***From an address by Leonard Spacek before the American Accounting Association Annual Meeting held at the University of Wisconsin, August 27, 1957, and since published in the April, 1958 issue of the Accounting Review. Words in parentheses are supplied by the present writer in order to abbreviate the quotations without, it is hoped, changing their intended meaning.

Spotlight on the Future

Contributed by National Association of Purchasing Agents
By Chester F. Ogden, Manager of Purchases
The Detroit Edison Company

General Business Conditions

♦ AS the time draws near for the decision as to whether there will be a steel strike or not, business continues to boom. Fear concerning a third-quarter slump is disappearing. Earlier this year, many of our members thought that some of the current good business might only be borrowing from the coming third and fourth quarters. However, in response to our special question, 42% now believe the third quarter this year will be better than the second, and 29% think it will be worse. An overwhelming 85% predict that this third quarter will be better than the similar period in 1958 and only 3% see it as poorer.

Predictions for the fourth quarter are even more rosy. In looking at the last half of 1959, 58% see better business than in the first half of 1959, while 17% look for a downturn. Again, the great majority—85%—believe the second half of 1959 will be better than the second half of 1958; and, again only 3% are pessimistic enough to think it will be worse.

There is no doubt that business, as of now, is good. All of our criteria point to near-boom conditions. Production soared to a new post-Korean War high, with 60% reporting improvement, and only 5% reductions. New orders continue to be booked in substantial volume, with 53% receiving more new orders than last month, and only 7% less.

Employment too, shows substantial gains, with more of our members telling of additions to their companies' payrolls than at any time since 1951.

Commodity prices are firming, with pressures for higher prices getting more difficult to contain.

Booming business has so favorably affected production schedules that it is becoming more difficult to maintain proper raw material inventories and still display reasonable prudence in forward commitments. But buyers are continuing to hold the line on forward commitments stating that, aside from steel items, they will not make any speculative purchases beyond those called for by orders on the books. This, plus keen competition, has gone a long way toward keeping some reasonable control in our fight against runaway inflation.

The threat of a steel strike does seem to be the major dark cloud on the horizon. Many of our members point out that their optimistic predictions would stand revision if we were to have a long interruption in steel production.

Commodity Prices

Industrial commodity prices have been relatively stable for the past several months due to keen competition for available business and ample supplies of most commodities. Now, however, prices are firming and Purchasing Executives are finding it harder to resist price increases. This month 30% report prices higher, 68% the same, and only 2% report prices as lower.

Inventories

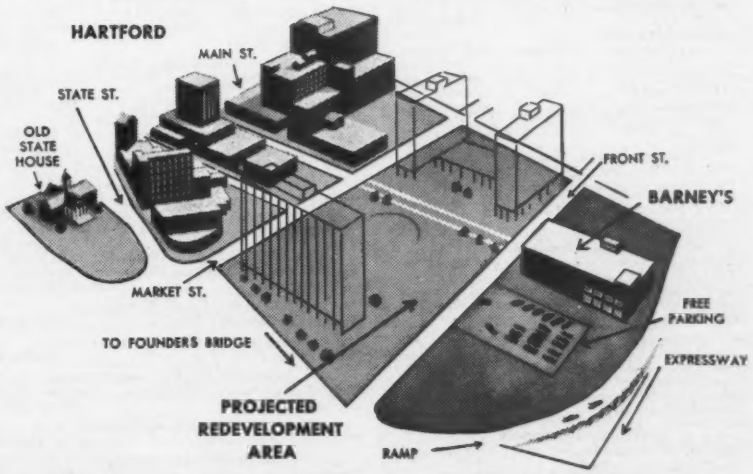
The trend toward increased inventories continues, though largely sparked by the steel situation. However, this month increased production and more instances of "late deliveries" have resulted in a fewer number, 39%, reporting their inventories up in May compared with April. There are 11% who report their inventories lower, with the balance—50%—maintaining last month's levels. With the exception of steel, buyer's comments are to the effect that they are holding inventories in line with their production requirements. It is also interesting to note that while many are increasing stocks because of concern about shortages resulting from strikes, only a few are stockpiling solely because they fear higher prices.

Employment

Again in May, we report another jump in employment figures. The number reporting employment as up this month (41%) exceeds by two percentage points the highest percent figure report in the boom period of 1955. Not since the Korean War build-up have so many reported improvement in their employment situation. Only 7% say their May employment figures are worse. The concensus is fairly general that renewed business confidence, backed by firm production schedules, has resulted in this willingness to add people to payrolls.

Composite opinion of purchasing agents who comprise the N.A.P.A. Business Survey Committee, whose Chairman is Chester F. Ogden, Vice President, The Detroit Edison Company, Detroit, Michigan.

In the Heart of Hartford's Redevelopment Area!



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IT'S MADE IN CONNECTICUT

EDITOR'S NOTE: This department, giving a partial list of peace-time products manufactured in Connecticut, seeks to facilitate contacts between prospective purchasers in domestic or foreign markets and producers. It includes only those listings purchased by Connecticut manufacturers. Interested buyers may secure further information by writing this department. Listing rates (12-time insertions only): $6.00 for single listing. When several listings are ordered for insertion at the same time following multiple rates apply: $10 for two and $2.00 each beginning with the third.

Absorbents
Nielsen & Sons Inc. John R (oil water and grease) South Windsor

Accounting Forms
Baker-Goodyear Co The Branford

Accounting Machines
Underwood Corporation Bridgeport

Adding Machines
Underwood Corporation Bridgeport

Adhesives
Polymer Industries Inc Springdale
Raybestos Division Raybestos-Manhattan Inc Bridgeport

Advertising Mats
Lockwood Sons Inc Wm H Hartford

Advertising Plates
Lockwood Sons Inc Wm H Hartford

Advertising Specialties
H C Cook Co The Ansonia

Air Compressors
Spencer Turbine Co The Hartford

Air-Conditioning
Dunham-Bush Inc West Hartford
Norwalk Airconditioning Corp South Norwalk

Air Ducts
Wiremold Co The (Retractable) Hartford

Air Heaters—Direct Fired
Peabody Engineering Corporation Stamford

Air Impellers
The Torrington Manufacturing Co Torrington

Aircraft
Sikorsky Aircraft Division United Aircraft Corporation (helicopters) Bridgeport

Aircraft Accessories
Chandler Evans Div Pratt & Whitney Co Inc (Piston and Jet Engine Accessories—Carburetors, Fuel Controls, Afterburner Regulators, Pumps, Servomechanisms and Protek Plugs) West Hartford
Consolidated Controls Corp Bethel
Fenn Mfg Co The (Hardened and Ground Gear assemblies) Newington
Gabb Special Products Inc (filler caps—pressure fuel servicing systems) Windsor Locks
Hamilton Standard Div United Aircraft Corp (propellors and other aircraft equipment) Windsor Locks

Aircraft Engine Timing Tools
Gabb Special Products Inc Windsor Locks

Aircraft Engine Details
Hartford Machine Screw Co Div of Standard Screw Co Hartford

Aircraft Engines
Lycoming Division Avco Canufacturing Corp Stratford
Pratt & Whitney Aircraft Div United Aircraft Corp (aircraft) East Hartford

Aircraft Fasteners
Bland Buner Co The Thread Products Div Hartford
Hartford Machine Screw Co Div of Standard Screw Co Hartford
Scovill Manufacturing Company (PANELOC Aircraft Fasteners) Waterbury

Aircraft Instruments
Gorn Electric Company Inc Stamford

Aircraft—Repair & Overhaul
Airport Department Pratt & Whitney Aircraft Division Rentschler Field East Hartford

Aircraft Studs and Bolts
Hartford Machine Screw Co Div of Standard Screw Co Hartford

Aircraft Test Equipment
United Manufacturing Co Division of The W L Maxson Corp Hamden

Alumilite Aluminum Sheets
Leed Co The H A Hamden

Aluminum Awnings
Norlee Aluminum Prod Corp Bloomfield

Aluminum Bronze Castings
Knapp Foundry Company Inc Guilford

Aluminum Castings
Eastern Malleable Iron Company The Naugatuck
Newton-New Haven Co West Haven

Aluminum Die Castings
Mt Vernon Die Casting Corporation Stamford
Stewart Die Casting Div. Stewart-Warner Corp. Bridgeport

Aluminum Extrusions
Bridgeport Brass Company Bridgeport

Aluminum Forgings
Bridgeport Brass Company Bridgeport
Consolidated Industries Inc West Cheshire
Scovill Manufacturing Company Waterbury

Aluminum Ingots
Lapides Metals Corp New Haven

Aluminum Sand Castings
Bridgeport Deoxidized Bronze Corp Bridgeport

Aluminum—Sheet and Rod
Scovill Manufacturing Company Waterbury

Aluminum—Sheets & Coils
United Smelting & Aluminum Co Inc New Haven

Aluminum Windows
Norlee Aluminum Prod Corp (combination and prime) Bloomfield

Ammunition
Winchester-Western Div Olin Mathieson Chemical Corp New Haven

Anodic Coating
Fenn Mfg Co The (Dow 17) Newington

Anodizing
Aluminum Finishing Co. Bridgeport
Comco Inc Div of Enthone Inc New Haven
Leed Co The H A Hamden

Anodizing Equipment
Comco Inc Div of Enthone Inc New Haven

Asbestos
Auburn Manufacturing Company The (gaskets, packings, wicks) Middletown

Asarcon Bronze
Derby Castings Company, The Seymour
Knapp Foundry Company Inc (bushing & bearing stock) Guilford

Assemblies—Small
Barnes Co The Wallace Div Associated Spring Corp Bristol
Greist Manufacturing Co The New Haven
Hartford Machine Screw Co Div of Standard Screw Co Hartford
Stanley Humason Inc Forestville
J H Sessions & Son Bristol

Audio-Visual Equipment
Victor Animatograph Corp a div of Kalart (16mm sound and silent projectors; 35mm filmstrip and sound slide film projectors) Plainville

Automatic Buffing & Polishing Machines
Harper Buffing Machine Company The East Hampton

Auto Cable Housing
Wiremold Company The Hartford

Automatic Assembly Machines
Sperry Products Inc Danbury

Automatic Control Instruments
Bristol Co The (temperature, pressure, flow, humidity, time) Waterbury

Automobiles—Children's
Powercar Company Mystic

Automotive Bodies
Metropolitan Body Company Bridgeport

Automotive Parts
Bridgeport Thermostat Div Robertshaw—Fulton Controls Co (automobile thermostats) Milford
Eis Manufacturing Co (Hydraulic and Mechanical) Middletown
Raybestos Division of Raybestos-Manhattan Inc (Brake Lining, Lined Brake Shoes, Clutch Facings, Automatic Transmission Parts, Fan Belts, Radiator Hose and Miscellaneous Rubber) Bridgeport

Automotive & Service Station Equipment
Scovill Manufacturing Company (Canned Oil Dispensers) Waterbury

Automotive Tools
Eis Manufacturing Company Middletown

Bag Sealing Machines
Derby Sealers Inc Derby

Bakelite Moldings
Watertown Mfg Co The Watertown

Balls
Abbott Ball Co The (steel bearing and burnishing) Hartford
Hartford Steel Ball Co The (steel bearing and burnishing, brass, bronze, monel, stainless aluminum) Hartford
Kilian Steel Ball Corp The Hartford
New Departure Div of General Motors (steel and steel alloys) Bristol
Pioneer Steel Ball Company Inc (steel for bearings, burnishing, graining; also brass, bronze and stainless) Unionville
Superior Steel Ball Co Inc (steel bearings & burnishing material) New Britain

Banbury Mixers
Farrel-Birmingham Company Inc Ansonia

Barrels
Abbott Ball Co The (burnishing and tumbling) Hartford
Esbec Barrel Finishing Corp (burnishing & tumbling) Byram
Hartford-Steel Ball Co The (tumbling) Hartford
King Co Alfred B (tumbling and plating) North Haven

Baskets—Wire
Rolock Inc Fairfield

Bearings
Barden Corporation The (ball) Danbury
Fafnir Bearing Co (ball) New Britain
Marlin-Rockwell Corporation Plainville
New Departure Div of General Motors (ball) Bristol
Norma-Hoffman Bearings Corp (ball and roller) Stamford
Torrington Co The Torrington

Bellows Assemblies
Bridgeport Thermostat Div Robertshaw—Fulton Controls Co Milford

Bellows—Metallic
Bridgeport Thermostat Div Robertshaw—Fulton Controls Co Milford

Bells
Bevin Brothers Mfg Co East Hampton
N N Hill Brass Co The East Hampton

Belt Fasteners
Saling Manufacturing Company (patented self-aligning) Unionville

Belting
Hartford Belting Co Hartford
Russell Mfg Co (High Speed Endless, Laminated Rubber, Roll Stock all types) Middletown

Bends—Pipe or Tube
National Pipe Bending Co The New Haven

Bicycle Sundries
Torrington Co The Torrington

Blacking Salts for Metals
Enthone Inc New Haven
Mitchell-Bradford Chemical Co Milford

Black Oxide Finishing
Black Oxide Inc New Britain

Black Oxide Treatment
Bennett Metal Treating Co The Elmwood

Blades
Capewell Manufacturing Company Metal Saw Division (hack saw and band saw) Hartford

Blocks
Howard Company (cupola fire clay) New Haven

Blower Fans
Colonial Blower Company Plainville
Spencer Turbine Co The Hartford
(Advt.)

IT'S MADE IN CONNECTICUT

Blower Systems
Colonial Blower Company — Plainville
Ripley Co — Middletown

Blower Wheels
Torrington Manufacturing Company The — Torrington

Blueprints and Photostats
Joseph Merritt & Co — Hartford

Boilers
Bigelow Co The — New Haven

Bolts and Nuts
Clark Brothers Bolt Co — Milldale
Torrington Co The — Torrington

Boring Tools
Atrax Company The (solid carbide) — Newington

Bottles
Feldman Glass Co. The — New Haven

Box Board
Bird & Son Inc — New Britain
Continental Can Co., Boxboard and Folding Carton Division — Montville
Federal Paper Board Co Inc — Montville, New Haven & Versailles
Lydall & Foulds Paper Co The — Manchester
New Haven Board & Carton Co The — New Haven
Robertson Paper Box Co — Montville

Boxes
Bird & Son Inc (corrugated, solid fibre, cleated containers) — New Britain
Connecticut Container Corporation — New Haven
Continental Can Co., Fibre Drum and Corrugated Box Division — Portland
Merriam Mfg Co (steel cash, bond, security, fitted tool and tackle boxes) — Durham
Middletown Mfg Co (metal) — Middletown
Warner Bros Co The (Acetate, Paper, Acetate and Paper Combinations, Counter Display, Setup) — Bridgeport

Boxes and Crates
City Lumber Co of Bridgeport Inc The — Bridgeport

Boxes—Folding
Leshine Carton Co — Branford

Boxes—Metal
Durham Mfg Co. — Durham
Merriam Mfg Co (Bond and Security, Cash and Utility, Personal Files and Drawer Safes) — Durham
Scovill Manufacturing Company (aluminum, brass, bronze, copper-cosmetic, drug, hair pin, ointment, pill, powder, rouge, vanity) — Waterbury

Boxes—Paper—Folding
Atlantic Carton Corp — Norwich
Bridgeport Paper Box Co — Bridgeport
Carpenter-Hayes Paper Box Co Inc — East Hampton
Continental Can Co., Boxboard and Folding Carton Division — Montville
Curtis & Sons Inc S — Sandy Hook
Folding Cartons Incorporated (paper, folding) — Versailles
Mills Inc H J — Bristol
National Folding Box Co Div Federal Paper Board Co Inc (paper folding) — New Haven and Versailles
New Haven Board & Carton Co The — New Haven
Robertson Paper Box Co — Montville
Warner Bros Co The — Bridgeport

Boxes—Paper—Setup
Bridgeport Paper Box Co — Bridgeport
Heminway Corporation The — Waterbury
Mills Inc H J — Bristol
Strouse Adler Company The — New Haven
Warner Bros Co The — Bridgeport

Brake Cables
Eis Manufacturing Co — Middletown

Brake Linings
Raybestos Division of Raybestos-Manhattan Inc (Automotive and Industrial) — Bridgeport
Russell Mfg Co (all types, Fused Fabric, Durak, Wireback, Extruded) — Middletown

Brake Service Parts
Eis Manufacturing Co — Middletown

Brass & Bronze
American Brass Co The (sheet, wire, rods, tubes) — Waterbury
Bridgeport Rolling Mills Company (coil, sheet, strip) — Bridgeport
Bristol Brass Corp The (sheet, wire, rods) — Bristol
Chase Brass & Copper Co — Waterbury
Miller Company The (phosphor bronze and brass in sheets, strips, rolls) — Meriden
Plume & Atwood Mfg Co The (sheet, wire, rod) — Thomaston
Scovill Manufacturing Company — Waterbury
Seymour Mfg Co The (strip, sheet & wire) — Seymour
Tinsheet Metals Co The (sheets and rolls) — Waterbury
Western Brass Mills Div of Olin Mathieson Chemical Corp (sheet, strip) — New Haven

Brass & Bronze Ingot Metal
Mitchell Smelting & Refining Co Inc — Botsford
Plume & Atwood Mfg Co The — Thomaston
Whipple and Choate Company The — Bridgeport

Brass, Bronze, Aluminum Castings
Derby Castings Company, The — Seymour
Victors Brass Foundry Inc — Guilford

Brass Goods
American Brass Company The — Waterbury
Plume & Atwood Mfg Co The (to order) — Waterbury
Rostand Mfg Co. The (Ecclesiastical Brass Wares) — Milford
Scovill Manufacturing Company (to order) — Waterbury
Western Brass Mills Div Olin Mathieson Chemical Corp — New Haven

Brass Mill Products
American Brass Company The — Waterbury
Chase Brass & Copper Co — Waterbury
Plume & Atwood Mfg Co The — Thomaston
Scovill Manufacturing Company — Waterbury
Seymour Manufacturing Co. The — Seymour
Western Brass Mills Div Olin Mathieson Chemical Corp — New Haven

Brick-Building
Donnelly Brick Co The — New Britain

Bricks—Fire
Howard Company — New Haven
Mullite Works Refractories Div H. K. Porter Co Inc — Shelton

Bright Wire Goods
Sargent & Company (Screw Eyes, Screw Hooks, Cup Hooks, Hooks and Eyes, C H Hooks) — New Haven

Broaching
Hartford Special Machinery Co The — Hartford

Bronze & Aluminum Castings
Knapp Foundry Company Inc (rough or machined) — Guilford

Bronze Sand Castings
Bridgeport Deoxidized Bronze Corp — Bridgeport

Brooms—Brushes
Fuller Brush Co The — Hartford

Buckles
B Schwanda & Sons — Staffordville
Hawie Mfg Co The — Bridgeport
North & Judd Manufacturing Co. — New Britain
Patent Button Co The — Waterbury
Risdon Manufacturing Co John M. Russell Div — Naugatuck

Buffing & Polishing Compositions
Apothecaries Hall Company Division — Waterbury
The Hubbard Hall Chemical Company
Lea Mfg Co — Waterbury

Building Materials
City Lumber Co of Bridgeport Inc — Bridgeport

Burners
Plume & Atwood Mfg Co The (kerosene oil lighting) — Thomaston

Burners—Automatic
Peabody Engineering Corporation — Stamford

Burners—Coal and Oil
Peabody Engineering Corporation (Combined) — Stamford

Burners—Gas
Peabody Engineering Corporation (Blast Furnace) — Stamford

Burners—Gas and Oil
Peabody Engineering Corporation (Combined) — Stamford

Burners—Refinery
Peabody Engineering Corporation (For Gas and Oil) — Stamford

Burnishing
Abbott Ball Co The (Burnishing Barrels and Burnishing Media) — Hartford
Pioneer Steel Ball Company Inc (balls, cones, other metallic shapes) — Unionville

Burs
Atrax Company The (carbide) — Newington
Pratt & Whitney Co Inc (carbide and HSS) — West Hartford

Business Forms
Connecticut Manifold Forms Co. The — West Hartford

Buttons
B Schwanda & Sons — Staffordville
Frank Parizek Manufacturing Co The — Putnam
Patent Button Co The — Waterbury
Scovill Manufacturing Company (Uniform and Tack Fasteners) — Waterbury
Waterbury Companies Inc (Uniform and Fancy Dress) — Waterbury

Cabinet Work
Hartford Builders Finish Co — Hartford

Cable—Asbestos Insulated
Rockbestos Products Corp — New Haven

Cable-Interlocked Armor
General Electric Company — Bridgeport

Cable—Nonmetallic Sheathed
General Electric Company — Bridgeport

Cable—Service Entrance
General Electric Company — Bridgeport

Cages
Andrew B. Hendryx Co The (bird and animal) — New Haven

Cams
American Cam Company Inc — Hartford
Hartford Special Machinery Co The — Hartford
Rowbottom Machine Company Inc — Waterbury

Cams, 2 Dimensional
Mallory Industries, Inc — West Hartford
Parker-Hartford Corporation — Hartford

Cams, 3 Dimensional
Mallory Industries, Inc — West Hartford
Parker-Hartford Corporation — Hartford

Capacitors
Electro Motive Mfg Co Inc. The (mica & trimmer) — Willimantic

Carbide Drawing Dies
State Products Co (eyelet special shape dies) — Oakville

Carbide Shape Dies
Thomaston Tool & Die Co (any form) — Thomaston

Carbide Tools
Atrax Company The (solid) — Newington
Precision Tool & Die Co — Waterbury

Carbon Pile Type Resistors
Engineered Metals — Manchester

Card Clothing
Standard Card Clothing Co The (for textile mills) — Stafford Springs

Card Indexes
Wassell Organization Inc — Westport

Carpenter's Tools
Sargent & Company (Planes, Squares, Plumb Bobs, Bench Screws, Clamps and Saw Vices) — New Haven

Carpets and Rugs
Bigelow-Sanford Carpet Co — Thompsonville

Carton Closure Equipment
Better Packages Inc ("Tape-O-Matic," "Better Pack") — Shelton

Casters
Bassick Company The (Industrial and General) — Bridgeport

Castings
Connecticut Foundry Co (grey iron) — Rocky Hill
Connecticut Malleable Castings Co. (malleable (iron castings) — New Haven
Ductile Iron Foundry Inc — Stratford
Eastern Malleable Iron Company The (malleable iron, metal and alloy) — Naugatuck
Farrel-Birmingham Company Inc (Meehanite Nodular, Iron, Steel) — Ansonia
H R Engineering Laboratories Inc (centrifugal, steel mold) — East Haddam
Hartford Electric Steel Corp The (carbon, low alloy and stainless steel castings) — Hartford
Malleable Iron Fittings Co (malleable iron and steel) — Branford
McLagon Foundry Co. (grey iron) — New Haven
Newton-New Haven Co (zinc and aluminum) — West Haven
Nutmeg Crucible Steel Co (steel) — Branford
Plainville Casting Company (gray, alloy and high tensile irons) — Plainville
Philbrick-Booth & Spencer Inc — Hartford
Producto Machine Company The — Bridgeport
Scovill Manufacturing Company (Brass & Bronze) — Waterbury
Turner & Seymour Mfg Co The (gray iron, semi steel and alloy) — Torrington
Union Mfg Co (grey iron & semi steel — New Britain
Waterbury Foundry Company The (highway & sash weights) — Waterbury
Wilcox Crittenden & Co Inc (gray iron and brass) — Middletown

(Advt.)

Castings—Investment
Arwood Precision Casting Corp — Groton

Cements—Refractory
Mullite Works Refractories Div H K Porter Co Inc — Shelton

Centerless Grinding
Brown Manufacturing Co. — New Britain
Winsted Centerless Co — Winsted

Centers
Ready Tool Co The (anti friction, carbide tipped, high speed) — Stratford

Centrifugal Pumps
Hamco Inc (gasoline or electric driven) — New Haven

Cermets
Russell Mfg Co (for missiles, and for friction materials) — Middletown

Chain
Risdon Manufacturing Co John M Russel Div — Naugatuck
Turner and Seymour Mfg Co The (weldless, sash, jack, safety, furnace, universal, lion and cable) — Torrington

Chain-Beaded
Auto-Swage Products Inc — Shelton
Bead Chain Mfg Co The — Bridgeport

Chain—Power Transmission and Conveying
Whitney Chain Company — Hartford

Chairs
The Hitchcock Chair Company — Riverton

Chemical Manufacturing
Carwin Company The — North Haven

Chemicals
Apothecaries Hall Company Division
The Hubbard Hall Chemical Company — Waterbury
Axton-Cross Co — Shelton
Carwin Company The — North Haven
Macalaster Bicknell Company — New Haven
MacDermid Incorporated — Waterbury
Naugatuck Chemical Division United States Rubber Co — Naugatuck
New England Lime Company — Canaan
Pfizer & Co Inc Chas — Groton

Chemicals—Agriculture
Naugatuck Chemical Division United States Rubber Co (insecticides, fungicides, weed killers) — Naugatuck

Chemists—Analytical and Consulting
Bridgeport Testing Laboratory Inc — Bridgeport

Christmas Light Clips
Foursome Manufacturing Co — Bristol

Chromium Plating
Chromium Corp of America — Waterbury
Chromium Process Company The — Shelton

Chucks
Cushman Chuck Co The — Hartford
Jacobs Manufacturing Co The — West Hartford
Jacobs Manufacturing Co The (drill chucks lathe collet chucks and arbors) — West Hartford
Union Manufacturing Company — New Britain

Chucks—Drill
Jacobs Manufacturing Co The — West Hartford

Chucks & Face Plate Jaws
Cushman Chuck Co The — Hartford
Union Mfg Co — New Britain

Chucks—Power Operated
Cushman Chuck Co The — Hartford
Union Manufacturing Company — New Britain

Clay
Howard Company (Fire Howard "B" and High Temperature Dry) — New Haven

Cleaning Compounds
Enthone Inc (Industrial) — New Haven
MacDermid Incorporated — Waterbury

Clock Mechanisms
Lux Clock Mfg Co The — Waterbury

Clocks
E Ingraham Co The — Bristol
United States Time Corporation The — Waterbury

Clocks—Alarm
Lux Clock Mfg Co The — Waterbury

Clocks—Automatic Cooking
Lux Clock Mfg Co The — Waterbury

Clutches
Snow-Nabstedt Gear Corp The — New Haven

Clutch Facings
Raybestos Division of Raybestos-Manhattan Inc (Molded, Woven, Semi-metallic and Full-metallic) — Bridgeport
Russell Mfg Co (rubber Shock Cord—all sizes and types) — Middletown

Coil Winding Machines
Boesch Mfg Co Inc — Danbury

Coils—Electric
Bittermann Electric Company — Canaan
Rowley Spring Co. Inc., The (Airwould for television and electrical industries) — Bristol

Coils—Pipe or Tube
National Pipe Bending Co The — New Haven
Whitlock Manufacturing Co The — Hartford

Cold Molded Electrical Insulation
Meriden Molded Plastics — Meriden

Commercial Heat Treating
A F Holden Company The — West Haven

Commercial Truck Bodies
King Co Alfred B — North Haven
Metropolitan Body Company — Bridgeport

Compacts
Scovill Manufacturing Company (powder and rouge) — Waterbury

Comparators
Pratt & Whitney Co Inc (Electro-limit and Air-O-Limit) — West Hartford

Compressors
Norwalk Company Inc (high pressure air and gas) — South Norwalk

Computers
Reflectone Corporation The — Stamford

Concrete Products
Plasticrete Corp — Hamden

Condenser and Heat Exchanger Tubes
Bridgeport Brass Company — Bridgeport
Scovill Manufacturing Company — Waterbury

Cones
Sonoco Products Co (Climax-Lowell Div.) (Paper) — Mystic

Connector
Gorn Electric Co Inc (precision miniature electrical and printed circuit) — Stamford

Consulting Engineers
McNeal J D (Electrical and Electronic) — New Haven
Stanley P. Rockwell Co Inc The (Consulting) — Hartford

Continuous Mill Gages
Pratt & Whitney Co Inc — West Hartford

Contract Machining
Laurel Mfg Co Inc (Precision Production Small Parts) — Plainville
Malleable Iron Fittings Company — Branford

Contract Manufacturers
Fenn Mfg Co The (Precision Machine Work) — Newington
Greist Mfg Co The (metal parts and assemblies) — New Haven
Hartford Machine Screw Co Div of Standard Screw Co — Hartford
Merriam Mfg Co (production runs—metal boxes and containers to specifications) — Durham
Plume & Atwood Mfg Co The (metal parts and assemblies) — Thomaston
Scovill Manufacturing Company (metal parts and assemblies) — Waterbury
J H Sessions & Son — Bristol
Torrington Co The — Torrington

Controllers
Bristol Company The — Waterbury
Manning Maxwell & Moore Inc — Stratford

Controls—Remote
Panish Controls (Remote Controls for Marine & Aeronautic Applications) — Bridgeport

Controls—Hydraulic Remote
Sperry Products Inc — Danbury

Converters DC to AC
Electric Specialty Co — Stamford

Conveyer Systems
Hayes-Te Equipment Corp Connecticut Conveyor Division (Conveyor Co The) — Unionville
King Co Alfred B — North Haven
Leeds Conveyor Mfg Co The — East Haven
Production Equipment Co — Meriden

Copper
American Brass Corp The (sheet, wire, rods, tubes) — Waterbury
Bristol Brass Corp The (steel) — Bristol
Chase Brass & Copper Co (sheet, rod, wire tube) — Waterbury
Thinsheet Metals Co The (sheet and rolls) — Waterbury
Western Brass Mills Div Olin Mathieson Chemical Corp — New Haven

Copper Castings
Knapp Foundry Company Inc — Guilford

Copper Sand Castings
Bridgeport Deoxidized Bronze Corp — Bridgeport

Copper Sheets
American Brass Company The — Waterbury
New Haven Copper Co The — Seymour

Copper Shingles
New Haven Copper Co The — Seymour

Copperware
Bridgeport Brass Company (cooking utensils) — Bridgeport

Copper Water Tube
American Brass Company The — Waterbury

Cord
Russell Mfg Co The (marine & aero shock) — Middletown

Cords—Asbestos Insulated
General Electric Company — Bridgeport

Cords—Braided
General Electric Company — Bridgeport

Cords—Heater
General Electric Company — Bridgeport

Cords—Portable
General Electric Company — Bridgeport

Cord Sets—Electric
General Electric Company — Bridgeport
Seeger-Williams Inc — Bridgeport

Cork Cots
Sonoco Products Co (Climax-Lowell Div) — Mystic

Corn Cob Meal
Nielsen & Sons Inc. John R (graded) — South Windsor

Correspondence Files
Wassell Organization Inc — Westport

Corrugated Box Manufacturers
Connecticut Container Corporation — New Haven
Corrugated Containers Inc — Hartford

Corrugated Shipping Cases
Connecticut Container Corporation — New Haven
Continental Can Co. Fibre Drum and Corrugated Box Division — Portland
D L & D Container Corp — New Haven

Cosmetic Containers
Eyelet Specialty Div. International Silver Co. — Wallingford
Plume & Atwood Mfg Co The (metal) — Thomaston
Scovill Manufacturing Company — Waterbury

Cosmetics
J B Williams Co The — Glastonbury

Cotton and Asbestos Wicking
Bland Burner Co The — Hartford

Counting Devices
Veeder-Root Inc — Hartford

Couplings
Scovill Manufacturing Company (hose and tube) — Waterbury

Crushers
Farrel-Birmingham Company Inc (Stone and Ore) — Ansonia

Cushioning for Packaging
Gilman Brothers Co The — Gilman

Cutters
Atrax Company The (solid carbide) — Newington
Mitrametric Co The (ground pinion) — Torrington
Pratt & Whitney Co Inc (Milling Cutters all types carbide and HSS) — West Hartford

Cutting & Creasing Rule
Bartholomew Co H J — Bristol

Decalcomanias
Sirocco Screenprints — New Haven

Deep Hole Drilling & Reaming
Hamden Deep Hole Drilling Co — Hamden

Deep Drawings
Stanley Pressed Metal — New Britain

Deep Hole Drilling & Reaming
Wilson Arms Co. — Hamden

Delayed Action Mechanism
M H Rhodes Inc — Hartford
R W Cramer Company Inc The — Centerbrook

Demineralizers
Crystal Research Laboratories — Hartford

Design
Designers for Business and Industry (product design-appearance) — New Haven

Design & Drafting Service
Smith & Winchester Mfg Co The — South Windham

Diamonds—Industrial
Parsons Diamond Products Inc — West Hartford

Dictating Machines
Dictaphone Corporation — Bridgeport
Gray Manufacturing Company The — Hartford
SoundScriber Corporation The — New Haven

Die Cast Dies
C & F Tool & Die Corp — Bridgeport

Die Castings
Newton-New Haven Co Inc — New Haven
Stewart Die Casting Div Stewart-Warner Corp — Bridgeport

Die Casting Dies
ABA Tool & Die Co — Manchester
Eastern Machine Screw Corp The — New Haven
Weimann Bros Mfg Co. The — Derby

Die Heads—Self Opening
Eastern Machine Screw Corp The — New Haven
Geometric Tool Division, Greenfield Tap & Die Corp — New Haven

Die Polishing Machinery
Hartford Special Machinery Co The — Hartford

Die Sets
Producto Machine Company The — Bridgeport
Union Mfg Co (precision, steel and semi-steel) — New Britain

Die Sinkers
Pratt & Whitney Co Inc — West Hartford

Dies
Hoggson & Pettis Mfg Co The — New Haven
Mitrametric Co The (ground for gears) — Torrington
Pratt & Whitney Co Inc (Monocone and Ducone Dies) — West Hartford
Pratt & Whitney Co Inc (thread cutting and thread rolling) — West Hartford

Dies & Die Cutting
Douglas Co Geo M — New Haven

Dies—Steel Rule
Acme Steel Rule Die Corporation — Waterbury

Display Containers
National Folding Box Co Div Federal Paper Board Co Inc (folding paperboard) — New Haven and Versailles

Displays—Design & Production
Ad-Craft Displays, Inc. — Bloomfield
Conn-Craft Co. (Plastic) — Waterbury
Stifel & Kufta — New Britain

Display Equipment
Polecats Inc — Old Saybrook

Displays—Metal
Durham Mfg Co The (Designing & Mfg to customers' specifications) — Durham
Merriam Mfg Co (Contract Work to Individual Specifications) — Durham
Parsons Co Inc W A (custom designed) — Durham

Displays—Plastic
Dura Plastics of New York, Inc. — Westport

Door Closers
Sargent & Company — New Haven
Yale & Towne Mfg Co The — Stamford

Doors
Bilco Co The (metal, residential and commercial) — West Haven

Dowel Pins
Allen Manufacturing Co The — Hartford
Hartford Machine Screw Co Div of Standard Screw Co — Hartford
Holo-Krome Screw Corp The — West Hartford
Torrington Co The — Torrington

Drafting Accessories
Joseph Merritt & Co — Hartford

Drill Presses
Townsend Mfg Co The H P — Elmwood

Drilling Machines
Howe & Fant Inc (Turret Type) — East Norwalk
Pratt & Whitney Co Inc (Deep Hole) — West Hartford

Drilling and Tapping Machinery
Hartford Special Machinery Co The — Hartford

Drop Forgings
Atwater Mfg Co — Plantsville
Billings & Spencer Co The — Hartford
Consolidated Industries — West Cheshire
Wilcox Crittenden & Co Inc — Middletown

Druggists' Rubber Sundries
Seamless Rubber Company The — New Haven

Duplicating Machines—Automatic
Pratt & Whitney Co Inc — West Hartford

Duplicator Tables
Regent Machine Co — Bridgeport

Elastic
Russell Mfg Co (rubber shock cord—all sizes and types) — Middletown

Electric Cables
General Electric Company (for residential, commercial and industrial applications) — Bridgeport
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Cord Springs
Bristol Spring Manufacturing Co — Plainville

Electric Cords
General Electric Company — Bridgeport
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Eye Control
Ripley Company Inc — Middletown

Electric Fixture Wire
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Hand Irons
Winsted Hardware Mfg Co (trade mark "Durablit") — Winsted

Electric Heating Elements
Hartford Element Co — Hartford

Electric Ignition Harnesses
General Electric Company — Bridgeport

Electric Insulation
Case Brothers Inc — Manchester
Stevens Paper Mills Inc The — Windsor

Electric Lighting Fixtures
Fan-Craft Mfg Co (residential, church, post lanterns) — Plainville
Plume & Atwood Mfg Co The — Thomaston
Wasley Products Inc — Plainville

Electric Motor Controls
Arrow-Hart & Hegeman Electric Co The — Hartford

Electric Motor Winding
Monarch Electric Co (3 phase industrial motors) — New Britain

Electric Motor Repair
B & J Electric Co — Ansonia

Electric Motors
Monarch Electric Co (Allis Chalmers) — New Britain

Electric Switches
Arrow-Hart & Hegeman Electric Co The — Hartford

Electric Time Controls
Cramer Controls Corporation The — Centerbrook

Electric Underfloor Duct System
General Electric Company — Bridgeport

Electric Wire
General Electric Company — Bridgeport
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Wiring Devices
Arrow-Hart & Hegeman Electric Co The — Hartford

Electrical Appliances
Iona Manufacturing Company The — Manchester

Electrical Conduit Fittings & Grounding Specialties
Gillette-Vibber Company The — New London

Electrical Control Apparatus
Plainville Electrical Products Co The — Plainville

Electrical Controls
Monarch Electric Co (Allis Chalmers) — New Britain

Electrical Motors
Electric Specialty Co — Stamford
Iona Manufacturing Company The — Manchester
U S Electrical Motors Inc — Milford

Electrical Recorders
Bristol Co The — Waterbury

Electrical Relays and Controls
Allied Control Co — Plantsville

Electrical Switchboards
Plainville Electrical Products Co The — Plainville
Pneumatic Applications Co — Simsbury

Electrical Test Equipment
McNeal J D — New Haven

Electrical Wiring Systems
Wiremold Co The — Hartford

Electronic Parts
Patent Button Company The — Waterbury
Prentice Mfg Co The G E (stampings to customers' specifications) — Kensington
Terryville Manufacturing Co (Stampings to customer specifications) — Terryville

Electronics
Gray Manufacturing Company the — Hartford
McNeal J D — New Haven
Middletown Mfg Co (metal cabinets, chassis panels, brackets, cases) — Middletown
Ripley Co — Middletown
Sturrup Larabee & Warmers Inc — Middletown
Vinco Electronics Corporation — New Haven

Electroplating
Giering Metal Finishing Inc — Hamden
National Sherardizing & Machine Co — Hartford
Waterbury Plating Company — Waterbury

Electroplating—Equipment & Supplies
Apothecaries Hall Company Division — Waterbury
Comeo Inc Div of Enthone Inc — New Haven
Hubbard Hall Chemical Company The — Waterbury
Lea Manufacturing Co The — Waterbury
MacDermid Incorporated — Waterbury

Electroplating Processes & Supplies
Enthone Inc — New Haven

Electrotypes
Barnum-Hayward Electrotype Co Inc — New Haven
Lockwood Sons Inc Wm H — Hartford
New Haven Electrotype Div Electrographic Corp — New Haven

Elevators
Eastern Elevator Co (passenger and freight) — New Haven
General Elevator Service Co — Hartford

Enameling
Giering Metal Finishing Inc — Hamden
Waterbury Plating Company — Waterbury

Enamels & Lacquers
Dobbs Chemical Co The (industrial finishes to customers' specifications) — New Haven

End Milling Cutters
Pratt & Whitney Co Inc (carbide and HSS) — West Hartford

End Mills
Atrax Company The (solid carbide) — Newington

Engraving—Plastic and Nonferrous Metals
Conn-Craft Co. — Waterbury
New England Engraving Company Div. of Dura Plastics of New York, Inc. — Westport
Salisbury Products Inc — Lakeville

Envelopes
Curtis 1000 Inc — Hartford
United States Envelope Company Hartford Division — Hartford

Excelsior
Nielsen & Sons Inc John R — South Windsor

Extractors—Tap
Walton Company The — West Hartford (Advt.)

Extruders and Accessories
Davis Electric Company (Ram Type Teflon Extruder) Wallingford
Standard Machinery and Davis-Standard Divisions of Franklin Research Corp Mystic

Eyelets
American Brass Company The Waterbury
Mark Eyelet & Stamping Co (small—metal stampings) Wolcott
Platt Bros & Co The Waterbury
Plume & Atwood Mfg Co The Thomaston
Scovill Manufacturing Company Waterbury
Stevens Co Inc Waterbury
Waterbury Companies Inc Waterbury

Eyelets, Ferrules and Wiring Terminals
American Brass Company The Waterbury
Waterbury Companies Inc Waterbury

Eyelet Machine Products
American Brass Company The Waterbury
Ball & Socket Mfg Co the West Cheshire
Cold Forming Mfg Co The Waterbury
Platt Bros & Co The Waterbury
Plume & Atwood Mfg Co The Thomaston
Stevens Co Inc Waterbury
Waterbury Companies Inc Waterbury

Fabricators
King Co Alfred B North Haven
Scovill Manufacturing Company (aluminum, brass, bronze, copper, steel) Waterbury

Fabrics
Russell Mfg Co (Teflon, Moulded Fabric, Bearing Surfaces, High Temperature Fabrics) Middletown

Fan Blades
Torrington Manufacturing Company The Torrington

Fancy Dress Buttons and Buckles
Waterbury Companies Inc Waterbury

Fans—Electric
General Electric Company Bridgeport
Monarch Electric Co (attic, industrial and ventilating) New Britain

Fasteners—Aircraft
Scovill Manufacturing Company (PANELOC Aircraft Fasteners) Waterbury

Fasteners—Industrial
Torrington Co The Torrington

Fasteners—Laundry Proof
Scoville Manufacturing Company (GRIPPER snap fasteners) Waterbury

Fasteners—Slide & Snap
Scovill Manufacturing Company (GRIPPER zippers and GRIPPER snap fasteners) Waterbury

Felt
Auburn Manufacturing Company The (mechanical, cut parts) Middletown
Dryeor Felt Company (paper makers and industrial) Staffordville

Felt—All Purpose
American Felt Co (Mill & Cutting Plant) Glenville
Chas W House & Sons Inc (Mills & Cutting Plant) Unionville

Fiber-glass Fabrication
Davis Co The E J West Haven

Fibre Board
Bird & Son Inc New Britain
Case Brothers Inc Manchester
Colonial Board Company Manchester
C H Norton Co The North Westchester
Stevens Paper Mills Inc The Windsor

File Cards
Standard Card Clothing Co The Stafford Springs

Filing Equipment
Wassell Organization Inc Westport

Filters—Fluid
Cuno Engineering Corp The Meriden

Finger Nail Clippers
H C Cook Co The Ansonia

Firearms
Colt's Patent Fire Arms Mfg Co Inc Hartford
Junior Screw Machine Products Inc West Haven
Marlin Firearms Co The New Haven
O F Mossberg & Sons Inc New Haven
Winchester-Western Div Olin Mathieson Chemical Corp New Haven

Fire Alarm Systems
Fire-Lite Alarms Inc New Haven

Fire Hose
Fabrics Fire Hose (municipal and industrial) Sandy Hook

Fireplace Goods
John P Smith Co The (screens) New Haven

Fireworks
M Backes' Sons Inc Wallingford

Fishing Tackle
H C Cook The Ansonia

Flashlights
Bridgeport Metal Goods Mfg Co Bridgeport

Flat Springs
Bristol Spring Manufacturnig Co Plainville
Gemco Manufacturing Co Inc Southington

Flexible Shaft Machines
Pratt & Whitney Co Inc West Hartford

Float Switches
Gorn Electric Co Inc (for aircraft and commerical use) Stamford

Floor & Ceiling Plates
Beaton & Cadwell Mfg Co The New Britain

Fluorescent Lighting Equipment
Fullerton Manufacturing Corp Norwalk
Vanderman Manufacturing Co The Willimantic
Wiremold Company The Hartford

Foam Rubber
Armstrong Rubber Company The West Haven

Forgings
Atwater Manufacturing Company Plantsville
Billings & Spencer Company Hartford
Bridgeport Hardware Mfg Corp The Bridgeport
Capewell Manufacturing Company Hartford
Chase Brass & Copper Co Waterbury
Clark Brothers Bolt Co Milldale
Consolidated Industries Inc West Cheshire
Heppenstall Co (all kinds and shapes) Bridgeport
Scovill Manufacturing Company (Non-ferrous) Waterbury

Foundries
Connecticut Malleable Castings Co (malleable iron castings) New Haven
Derby Castings Company, The Seymour
Ductile Iron Foundry Inc Stratford
Farrel-Birmingham Company Inc (Iron and Steel) Ansonia
Hartford Electric Steel Corp The Hartford
Malleable Iron Fittings Co (Malleable Iron and Steel Castings) Branford
Plainville Casting Company (gray, alloy and high tensile irons) Plainville
Producto Machine Company The Bridgeport
Smith & Winchester Mfg Co The South Windham
Turner & Seymour Mfg Co The (gray, iron, semi steel and alloy) Torrington
Union Mfg Co (gray iron & semi steel) New Britain
Wilcox Crittenden & Co Inc (iron, brass, aluminum and bronze) Middletown

Fountain Pens and Mechanical Pencils
Waterman Pen Company Inc Seymour

Foundry Riddles
John P Smith Co The New Haven

Four Slide Forms
Peck Spring Co Plainville

Frames—Hack Saw
Thompson & Son Co The Henry G New Haven

Fuel Oil Pump and Heater Sets
Peabody Engineering Corporation Stamford

Furnaces
Norwalk Airconditioning Corp South Norwalk

Gage Blocks
Pratt & Whitney Co Inc (Alloy steel and Carbide, Hoke and USA) West Hartford

Galvanising
Malleable Iron Fittings Co Branford
Wilcox Crittenden & Co Inc Middletown

Gaskets
Auburn Manufacturing Company The (from all materials) Middletown
Raybestos Division of Raybestos-Manhattan Inc Bridgeport

Gaskets—Insulation
American Felt Co Glenville

Gas Range Conversion Burner
Holyoke Heater Corp of Conn Inc Hartford

Gas Scrubbers, Coolers and Absorbers
Peabody Engineering Corporation Stamford

Gauges
Bristol Co The (pressure and vacuum-recording automatic control) Waterbury
Helicoid Gage Division American Chain & Cable Co The (pressure and vacuum) Bridgeport
Manning Maxwell & Moore Inc Stratford
New Haven Trap Rock Co The Machine Products Div (Johan Universal and Special Purpose Gauge) North Branford
Pratt & Whitney Co Inc (Precision Measurement all types) West Hartford

Gears
Mitrametric Co The (blanked fine pitch) Torrington

Gears and Gear Cutting
Farrel-Birmingham Company Inc Ansonia
Fenn Mfg Co The Newington
Hartford Special Machinery Co The Hartford
United Gear & Machine Co Suffield

Generators
Hameo Inc (electric, portable, gasoline driven) New Haven

Glass Bowing
Macalaster Bicknell Company New Haven

Glass Containers
Feldman Glass Co. The New Haven

Glass Cutters
Fletcher-Terry Co The Forestville

Greeting Cards
A D Steinbach & Sons Inc New Haven

Grinding
Farrel-Birmingham Company Inc (Roll and Cylindrical) Ansonia
Hartford Special Machinery Co The (gears, threads, cams and splines) Hartford
Horberg Grinding Industries Inc (Precision custom grinding; centerless, cylindrical, surfaces, internal and special) Bridgeport
K-F & D Mfg Company The (Contour and Precision) Manchester

Grinding Heads—Internal
Pratt & Whitney Co Inc (Pneumatic, High Speed) West Hartford

Grinding Machines
Farrel-Birmingham Company Inc (Roll) Ansonia
Pratt & Whitney Co Inc (Surface, Die, Gear and Cutter Grinders) West Hartford
Rowbottom Machine Company Inc (cam) Waterbury

Grommets
American Brass Company The Waterbury
Plume & Atwood Mfg Co The Waterbury

Guards for Machinery
Wheeler Co The G E New Haven

Hack and Band Saw Blades
Capewell Manufacturing Co The Hartford

Hair Hygiene Preparations
Parker Herbex Corporation Stamford

Hammers—Carpenters and Machinists
Capewell Manufacturing Company Hartford

Hand Tools
Billings and Spencer Company (wrenches sockets and shop tools) Hartford
Bridgeport Hardware Mfg Corp The (screw drivers, wrenches, nail pullers, box & crate openers, pliers, saws, trowels & special forgings) Bridgeport

Hardness Testers
Wilson Mechanical Instrument Div American Chain & Cable Company Inc Bridgeport

Hardware
Bassick Company The (Automotive) Bridgeport
City Lumber Co of Bridgeport Inc Bridgeport
Gordon Associates Derby
Harlock Products Corp New Haven
Sargent & Company New Haven
Wilcox Crittenden & Co Inc (marine heavy and industrial) Middletown
Yale & Towne Mfg Co The Stamford

Hardware—Marine & Bus
Rostand Mfg Co The Milford

Hardware—Trailer Cabinet
Excelsior Hardware Co The Stamford

Hardware, Trunk & Luggage
Corbin Cabinet Lock Div American Hardware Corp New Britain
J H Sessions & Son Bristol
Yale & Towne Mfg Co The Stamford

Hat Machinery
Doran Bros Inc Danbury

Health Surgical & Orthopedic Supports
Berger Brothers Company The (custom made for back, breast and abdomen) New Haven

Heat Elements
Electro-Flex Heat Inc Hartford
Safeway Heat Elements Inc (woven wire resistance type) Middletown

Heat Exchangers
Whitlock Manufacturing Co The Hartford

Heat Sealing—Electronic
Berger Bros (vinyl-polyethylene) New Haven

Heat Treating
Bennett Metal Treating Co The Elmwood
Commercial Metal Treating Co Bridgeport
Hartford Machine Screw Company Hartford
New Britain-Gridley Machine Division The New Britain Machine Co New Britain
New Haven Heat Treating Co Inc New Haven
Skene Co Inc The William A (metals) Bridgeport
Stanley P Rockwell Co Inc The Hartford (Advt.)

Heat-Treating Equipment
Barnes Co The Wallace Div Associated Spring Corp Bristol
Bauer & Company Inc Hartford
Rolock Inc (Retorts, Muffles, etc) Fairfield
Stanley P Rockwell Co Inc The (commercial) Hartford

Heat Treating Fixtures
Rolock Inc (Trays, Baskets, etc.) Fairfield
Wiretex Mfg Co Inc Bridgeport

Heat Treating Salts and Compounds
Mitchell-Bradford Chemical Co Milford

Heaters—Electric
General Electric Company Bridgeport

Heating and Cooling Coils
G & O Manufacturing Co New Haven

Heating Elements
Hartford Element Co Hartford

Heavy Chemicals
Naugatuck Chemical Division United States Rubber Co (sulphuric, nitric and muriatic acids and aniline oil) Naugatuck

Heavy Machinery
Smith & Winchester Mfg Co The South Windham

Hex-Socket Screws
Allen Manufacturing Company The Hartford
Bristol Company The Waterbury
Hartford Machine Screw Co Div of Standard Screw Co Hartford
Holo-Krome Screw Corp The West Hartford

High Frequency Alternators
Electric Specialty Co Stamford

Highway Guard Rail Hardware
Malleable Iron Fittings Co Branford

Hinges
Homer D Bronson Company Beacon Falls

Hobs and Hobbings
ABA Tool & Die Co Manchester
Pratt & Whitney Co Inc (Die and Thread milling) West Hartford

Hoists and Trolleys
Union Mfg Company New Britain

Honing
K-F & D Mfg Company The Manchester

Hose Fittings
Scovill Manufacturing Company Waterbury

Hose—Flexible Metallic
American Brass Co
American Metal Hose Branch Waterbury

Hose Supporter Trimmings
Hawie Mfg Co The (So-Lo Grip Tabs) Bridgeport

Hospital & Rehabilitation Equipment
Polecats Inc Old Saybrook

Hydraulic Brake Fluids
Eis Manufacturing Co Middletown

Hypodermic Needles
Roehr Products Company Waterbury

Impregnating
American Metaseal Inc (metal, wood etc.) Hamden

Industrial Chrome Plating
Mirror Polishing & Buffing Co Waterbury

Industrial Displays
Sansone Co S Frederick (Designers Builders and Counselors) Short Beach

Industrial Finishes
Chemical Coatings Corporation Rocky Hill

Inks
Waterman Pen Company Inc Seymour

Insecticides
American Cyanamid Company Waterbury

Instalment Payment Books
Wassell Organization Inc Westport

Insulated Wire & Cable
General Electric Company (for residential commercial and industrial applications) Bridgeport
Kerite Company The Seymour

Insulated Wire & Cable Machinery
Davis Electric Company Wallingford

Instruments
Bristol Company The Waterbury
Manning Maxwell & Moore Inc Stratford
Penn Keystone Corporation Derby
Pratt & Whitney Co Inc (Precision Measuring) West Hartford

Integrators
Reflectone Corporation The Stamford

Interval Timers
Lux Clock Manufacturing Company Waterbury
Rhodes Inc M H Hartford

Jacquard
Case Brothers Inc Manchester

Japanning
H Sessions & Son Bristol

Jig Borer
Linley Brothers Company Bridgeport
Moore Special Tool Co (Moore) Bridgeport
Pratt & Whitney Co Inc West Hartford

Jigs, Fixtures & Gages
Federal Machine & Tool Co Bristol

Jig Grinder
Moore Special Tool Co (Moore) Bridgeport
Pratt & Whitney Co Inc West Hartford

Junior Automobiles
Power Car Company Mystic

Keller Machines
Pratt & Whitney Co Inc West Hartford

Key Blanks
Sargent & Company New Haven
Yale & Towne Mfg Co The Stamford

Labels
Naugatuck Chemical Division United States Rubber Co (for rubber articles) Naugatuck

Label Dispensers
Derby Sealers Inc (pressure-sensitive labels) Derby

Label Moisteners
Better Packages Inc ("Counterboy"—"Packer") Shelton
Derby Sealers Inc Derby

Laboratory Equipment
Eastern Industries Inc New Haven

Laboratory Supplies
Macalaster Bicknell Company New Haven

Laces
American Fabrics Company The Bridgeport
Wilcox Lace Corporation The Middletown

Laces and Nettings
Wilcox Lace Corporation The Middletown

Lacquers & Synthetic Enamels
Chemical Coatings Corporation Rocky Hill
I-Sis Chemicals Inc Stamford

Ladders
Flint Co A W New Haven

Laminated Metal
Bridgeport Brass Company Bridgeport

Lamps
Plume & Atwood Mfg Co The (metal oil) Waterbury

Lampholders—Incandescent and Flourescent
General Electric Company Bridgeport

Lamp Shades
Verplex Company The Essex

Lanterns—Battery Operated
Electrical Div Olin Mathieson Chemical Corp New Haven

Lathes—Toolroom and Automatic
Pratt & Whitney Co Inc West Hartford

Lead Plating
Christie Plating Co The Groton

Leather
Norwich Leather Co Norwich
Herman Roser & Sons Inc (Genuine Pigskin) Glastonbury

Leather Dog Furnishings
Andrew B Hendryx Co The New Haven
The Smith-Worthington Saddlery Co Hartford

Leather, Mechanical
Auburn Manufacturing Company The (packings, cups, washers, etc) Middletown

Letterheads
Lehman Brothers Inc (designers, engravers, lithographers) New Haven

Lighting Accessories—Fluorescent
General Electric Company Bridgeport

Lighting Equipment
Fullerton Manufacturing Corp Norwalk
Miller Co The (Miller, Ivanhoe) Meriden

Lime
New England Lime Company Canaan

Lipstick Cases
Scovill Manufacturing Company Waterbury

Lipstick Containers
Bridgeport Metal Goods Mfg Co Bridgeport
Plume & Atwood Manufacturing Co Waterbury

Lithographers
O'Toole & Sons Inc T Stamford

Lithographing
City Printing Co. The New Haven
Kellogg & Bulkeley A Division of Connecticut Printers Inc Hartford
Lehman Brothers Inc New Haven
A D Steinbach & Sons New Haven

Locks—Banks
Yale & Towne Mfg Co The Stamford

Locks—Builders
Sargent & Company New Haven
Yale & Towne Mfg Co The Stamford

Locks—Cabinet
Excelsior Hardware Co The Stamford
Yale & Towne Mfg Co The Stamford

Locks—Special Purpose
Yale & Towne Mfg Co The Stamford

Locks—Suitcase and Trimmings
Excelsior Hardware Co The Stamford

Locks—Trunk
Excelsior Hardware Co The Stamford
Yale & Towne Mfg Co The Stamford

Locks—Zipper
Excelsior Hardware Co The Stamford

Loom—Non-Metallic
Wiremold Company The Hartford

Lubricants—Extreme Temperatures
Alpha Molykote Corp Stamford

Lubricants—High Pressure
Alpha Molykote Corp Stamford

Lubricating System—Mist
Thompson & Son Co The Henry G New Haven

Lumber & Millwork Products
City Lumber Co of Bridgeport Inc Bridgeport

Machetes
Collins Company The Collinsville

Machine Design
Black Rock Mfg Co The Bridgeport

Machine Overload Monitors
Sperry Products Inc Danbury

Machine Shop Fabrication
Smith & Winchester Mfg Co The South Windham (Advt.)

Machine Tools
Farrel-Birmingham Company Inc — Ansonia
Pratt & Whitney Co Inc — West Hartford
Producto Machine Company The — Bridgeport

Machine Work
Banthin Engineering Co — Bridgeport
Black Rock Mfg Co The — Bridgeport
Farrel-Birmingham Company Inc — Ansonia
Fenn Manufacturing Company The (precision parts) — Newington
Fuller Brush Company The (precision contract work) — Hartford
Hartford Special Machinery Co The (contract work only) — Hartford
National Sheradizing & Machine Co. (job) — Hartford
Parker-Hartford Corporation — Hartford
Swan Tool & Machine Co The — Hartford
Torrington Manufacturing Co The (special rolling mill machinery) — Torrington
Torrington Co The — Torrington

Machinery
Conn Machine Repair Inc (special mfg) — Bridgeport
Davis Electric Company (Wire and Cable) — Wallingford
Fenn Manufacturing Company The (special) — Newington
Hallden Machine Company The (mill) — Thomaston
Torrington Manufacturing Co The (mill) — Torrington

Machinery—Automatic
Banthin Engineering Company (new and rebuilt) — Bridgeport

Machinery—Bolt and Nut
Waterbury Farrel Foundry & Machine Co The — Waterbury

Machinery—Cold Heading
Waterbury Farrel Foundry & Machine Co The — Waterbury

Machinery Dealers & Rebuilders
Botwinik Brothers — New Haven
Bristol Metal Working Equipment — East Hartford
Conn Machine Repair Inc — Bridgeport
J L Lucas and Son — Fairfield
State Machinery Co Inc — New Haven

Machinery—Extruding
Standard Machinery and Davis-Standard Divisions of Franklin Research Corp — Mystic

Machinery—Metal-Working
Fenn Mfg Co The — Newington
Waterbury Farrel Foundry & Machine Co The — Waterbury
Pratt & Whitney Co Inc — West Hartford

Machinery—Nut
Waterbury Farrel Foundry & Machine Co The (forming and tapping) — Waterbury

Machinery—Screw and Rivet
Waterbury Farrel Foundry & Machine Co The — Waterbury

Machinery—Wire Drawing
Fenn Mfg Co The — Newington
Waterbury Farrel Foundry & Machine Co The — Waterbury

Machinery Rebuilding
Conn Machine Repair Inc — Bridgeport

Machinery—Wire Straightening
Mettler Machine Tool Inc — New Haven

Machinery—Wire Straightening and Cutting
Mettler Machine Tool Inc — New Haven

Machines
Campbell Machine Div American Chain & Cable Co Inc (cutting & nibbling) — Bridgeport
Coulter & McKenzie Machine Co The (special, new development engineering design and construction) — Bridgeport
Patent Button Company The — Waterbury

Machines Automatic
Globe Tapping Machine Co — Bridgeport

Machines—Automatic Chucking
New Britain-Gridley Machine Division The New Britain Machine Co (multiple spindle and double end) — New Britain
Pratt & Whitney Co Inc (Potter & Johnson) — West Hartford

Machines—Brushing
Fuller Brush Co The — Hartford

Machines—Draw Benches
Fenn Manufacturing Company The — Newington

Machines—Forming
Nilson Machine Company The A H (four-slide wire and ribbon stock) — Shelton

Machines—Paper Ruling
John McAdams & Sons Inc — Norwalk

Machines—Precision Boring
New Britain-Gridley Machine Division The New Britain Machine Co. — New Britain

Machines—Rolling
Fenn Manufacturing Company The — Newington

Machines—Slotting
Waterbury Farrel Foundry & Machine Co The (screw head) — Waterbury

Machines—Special
Fenn Mfg Co The — Newington
Fuller Brush Co The — Hartford

Machines—Swaging
Fenn Manufacturing Company The — Newington
Torrington Co The — Torrington

Machines—Thread Rolling
Hartford Special Machinery Co The — Hartford
Peterson Division Mettler Machine Tool Inc — New Haven
Waterbury Farrel Foundry & Machine Co The — Waterbury

Machines—Turks Head
Fenn Manufacturing Company The — Newington

Machines—Wire Drawing
Fenn Manufacturing Company The — Newington

Machining—Horizontal Boring
Tucker Machine Co — New Haven

Manganese Bronze Ingot
Whipple and Choate Company — Bridgeport

Manicure Instruments
W E Bassett Company The — Derby

Marine Equipment
Wilcox-Crittenden Div North & Judd Mfg Co — Middletown

Marine Reserve Gears
Snow-Nabstedt Gear Corp The — New Haven

Marking Devices
Cooney Engraving Co — Branford
Hoggson & Pettis Mfg Co The — New Haven
Parker-Hartford Corporation (steel) — Hartford

Marking Tools
Parker-Hartford Corporation — Hartford

Materials Handling
Hayes-Te Equipment Corp Connecticut Conveyor Division (Conn-Veyor) — Unionville
Parsons Co Inc W A (tote pans) — Durham

Mats—Newspaper
Lockwood Sons Inc Wm H — Hartford

Mattresses
Waterbury Mattress Co — Waterbury

Metal Boxes
Durham Mfg Co — Durham
Parsons Co Inc W A (tool kits) — Durham

Metal Boxes and Displays
Durham Mfg Co The (Designing & Mfg to customers' specifications) — Durham
Merriam Mfg Co (Bond, Security, Cash, Utility, Personal Files, Drawer Safes, Custombilt containers and displays) — Durham
Middletown Mfg Co — Middletown

Metal Cleaners
Apothecaries Hall Company Division The Hubbard Hall Chemical Company — Waterbury
Enthone Inc — New Haven
MacDermid Incorporated — Waterbury

Metal Finishes
Enthone Inc — New Haven
Mitchell-Bradford Chemical Co — Milford

Metal Finishing
Hartford Industrial Finishing Co — Hartford
National Sheradizing & Machine Co — Hartford
Waterbury Plating Company — Waterbury

Metal Formings
Master Engineering Company — West Cheshire
Stanley Pressed Metal — New Britain

Metallurgists
Bridgeport Testing Laboratory Inc — Bridgeport

Metal Mouldings
Leed Co The H A — Hamden

Metal Novelties
H C Cook Co The — Ansonia

Metal Products—Stampings
American Brass Company The — Waterbury
Plume & Atwood Manufacturing Co — Thomaston
Prentice Mfg Co The G E — Kensington
J H Sessions & Son — Bristol
Scovill Manufacturing Company (Made-to-Order) — Waterbury
Stanley Pressed Metal — New Britain

Metal Specialties
Excelsior Hardware Co The — Stamford
Torrington Co The — Torrington

Metal Spinning
Moseley Metal Crafts Inc — West Hartford

Metal Stampings
American Brass Company The — Waterbury
Better Formed Metals Inc — Waterbury
DooVal Tool & Mfg Inc The — Naugatuck
Excelsior Hardware Co The — Stamford
Greist Mfg Co The — New Haven
H C Cook Co The — Ansonia
Stanley Humason Inc — Forestville
Mohawk Mfg Co (threaded) — Middletown
J A Otterbein Company The (metal fabrications) — Middletown
J H Sessions & Son — Bristol
Patent Button Co The — Waterbury
Plume & Atwood Mfg Co The — Thomaston
Saling Manufacturing Company — Unionville
Stanley Pressed Metal — New Britain
Swan Tool & Machine Co The — Hartford
Terryville Manufacturing Co — Terryville
Verplex Company The (Contract) — Essex
Waterbury Lock & Specialty Co The — Milford

Meters—Gas
Sprague Meter Company — Bridgeport

Meters—Parking
Rhodes Inc M H — Hartford

Microfilming
American Microfilming Service Co. — New Haven
Cine-Video Productions Inc — Milford

Milk Bottle Carriers
John P Smith Co The — New Haven

Mill Machinery
Torrington Manufacturing Company The — Torrington

Milling Machines
Pratt & Whitney Co Inc (Keller Tracer—Controlled Milling Machines) — West Hartford
Rowbottom Machine Company Inc (cam) — Waterbury

Mill Products
Scovill Manufacturing Company (aluminum, brass, bronze, nickel silver—sheet, rod, wire, tube) — Waterbury

Mill Supplies
Wilcox-Crittenden Div North & Judd Mfg Co — Middletown

Millwork
Hartford Builders Finish Co — Hartford

Miniature Precision Connectors
Gorn Electric Co — Stamford

Minute Minders
Lux Clock Mfg Co The — Waterbury

Mirror Rosettes and Hangers
Waterbury Companies Inc — Waterbury

Mixing Equipment
Easter Industries Inc — New Haven

Model Work
B & N Tool & Engineering Co (instruments and timing devices) — Thomaston
Conn-Craft Co. (Architectural and Industrial) — Waterbury

Mops
Fuller Brush Co The — Hartford

(Advt.)

Motion Picture Equipment
Victor Animatograph Corp a div of Kalart (16mm sound and silent projectors film splicers and rewinders) Plainville

Motion Pictures
Cine-Video Productions Inc Milford

Motor—Generator Sets
Electric Specialty Co Stamford

Motors—Electric Timing
Cramer Controls Corporation The Centerbrook

Motors—Synchronous
Cramer Controls Corporation The Centerbrook
Electric Specialty Co Stamford

Moulded Plastic Products
Butterfield Inc T F Naugatuck
Patent Button Co The Waterbury
Scott & Sons Mfg Co Geo S Wallingford
Waterbury Companies Inc Waterbury
Watertown Mfg Co The Watertown

Mouldings
Himmel Brothers Co The (architectural, metal and store front) Hamden

Moulds
ABA Tool & Die Co Manchester
Hoggston & Pettis Mfg Co The (steel) New Haven

Name Plates
Conn-Craft Co. (Metal and Plastic) Waterbury
Cooney Engraving Co Branford
Seton Name Plate Co (metal & plastic name plates and identification tags) New Haven

Napper Clothing
Standard Card Clothing Co The (for textile mills) Stafford Springs

Nettings
Wilcox Lace Corp The Middletown

Newspaper Mats
Lockwood Sons Inc Wm H Hartford

Nickel Anodes
Apothecaries Hall Company Division
The Hubbard Hall Chemical Company
Seymour Manufacturing Co. The Seymour
Waterbury

Nickel Silver
American Brass Company The Waterbury
Bridgeport Brass Company Bridgeport
Plume & Atwood Mfg Co The Thomaston
Seymour Mfg Co The Seymour
Waterbury Rolling Mills Inc (sheets, strips, rolls) Waterbury
Western Brass Mills Div Olin Mathieson Chemical Corp (sheet, strip) New Haven

Nickel Silver Ingot
Whipple and Choate Company The Bridgeport

Night Latches
Sargent & Company New Haven
Yale & Towne Mfg Co Inc Stamford

Nitriding
Hartford Machine Screw Company Hartford

Non-ferrous Metal Castings
Miller Company The Meriden

Nuts, Bolts and Washers
Clark Brothers Bolt Co Milldale
Hartford Machine Screw Co Div of Standard Screw Co Hartford
Torrington Co The Torrington

Office Equipment
Pitney-Bowes Inc Stamford
Underwood Corporation Bridgeport & Hartford
Wassell Organization Inc Westport

Office Printing
Kellogg & Bulkeley A Division of Connecticut Printers Inc Hartford

Offset Printing
City Printing Co. The New Haven

Oil Burners
Miller Company The (domestic) Meriden
Peabody Engineering Corp (Mechanical and/or Steam Atomizer) Stamford
Silent Gow Oil Burner Corp The Hartford

Oil Tanks
Norwalk Tank Co The (550 to 30M gals, underwriters above and under ground) South Norwalk
Whitlock Manufacturing Co The Hartford

Oils—Cutting
Anderson Oil and Chemical Company, Inc. Portland

Optical Cores & Ingots
Plume & Atwood Mfg Co The Thomaston

Otis Woven Awning Stripes
The Falls Company Norwich

Ovens—Electric
Bauer & Company Inc Hartford

Packaging-Engineering
Commerce Packaging Corp Stamford
National Export Corp. (Military and Commercial—equipped for domestic and export packaging, canning, crating and shipping) New Haven

Packaging & Packing
Commerce Packaging Corp Stamford
Mercer & Stewart Co The Hartford

Packing
Auburn Manufacturing Company The (leather, rubber, asbestos, fibre) Middletown
Raybestos Division of Raybestos-Manhattan Inc (Asbestos and Rubber Sheet) Bridgeport

Padlocks
Sargent & Company New Haven
Waterbury Lock & Specialty Co The Milford
Yale & Towne Mfg Co Inc Stamford

Pads—Office
The Baker Goodyear Company Branford

Paints
Tredennick Paint Manufacturing Co The Meriden

Paints and Enamels
Staminate Corp The New Haven

Panelyte
Leed Co The H A Hamden

Pants
Moore Special Tool Co (crush wheel dresser) Bridgeport

Pantographic Reproduction & Fabrication
Conn-Craft Co. (Metals, Plastics and Wood) Waterbury

Paperboard
Continental Can Co., Boxboard and Folding Carton Division Montville
Federal Paper Board Co Inc New Haven
New Haven Board & Carton Co The Montville, New Haven & Versailles
Robertson Paper Box Co Montville

Paper Boxes
Atlantic Carton Corp (folding) Norwich
National Folding Box Co Div Federal Paper Board Co Inc (folding) New Haven & Versailles
Mills Inc H J Bristol
New Haven Board & Carton Co The New Haven
Roberston Paper Box Co (folding) Montville

Paper Boxes—Folding and Setup
Bridgeport Paper Box Company Bridgeport
M Backers' Sons Inc Wallingford

Paper Clips
H C Cook Co The (steel) Ansonia

Paper Mill Machinery
Farrel-Birmingham Company Inc Ansonia

Paper—Shredded
Nielsen & Sons Inc John R South Windsor

Paper Tubes and Cores
Sonoco Products Co (Climax-Lowell) Div Mystic

Parallel Tubes
Sonoco Products Co (Climax-Lowell) Div Mystic

Parking Meters
Rhodes Inc M H Hartford

Parts
Hartford Machine Screw Co Div of Standard Screw Co Hartford
Scovill Manufacturing Company (ammunition, electric instrument, electrical appliance, fountain pen, instrument, lighting fixture, ordance, etc.—blanked, stamped, formed, drawn, re-drawn, forged, screw machined, headed, pointed, finished) Waterbury
Torrington Co The Torrington

Pattern-Makers
Farrel-Birmingham Company Inc Ansonia

Pattern Shop
Smith & Winchester Mfg Co The South Windham

Penlights
Bridgeport Metal Goods Mfg Co Bridgeport

Pet Furnishings
Andrew B Hendrix Co The New Haven

Phosphor Bronze
American Brass Company The Waterbury
Bridgeport Brass Company Bridgeport
Miller Company The (sheets, strips, rolls) Meriden
Seymour Mfg Co The Seymour
Waterbury Rolling Mills Inc (sheets, strips, rolls) Waterbury
Western Brass Mills Div Olin Mathieson Chemical Corp (sheets, strip) New Haven

Phosphor Bronze Ingots
Whipple and Choate Company The Bridgeport

Photo Engraving
Dowd Wyllie & Olson Inc Hartford
Wilcox Photo Engraving Co Inc New Haven

Photocopy Equipment and Supplies
Ludwig Inc F G Old Saybrook

Photographic Equipment
Electrical Div Olin Mathieson Chemical Corp New Haven
Kalart Company Inc Plainville

Piano Repairs
Pratt Read & Co Inc (keys and action) Ivoryton

Piano Supplies
Pratt Read & Co (keys and actions, backs, plates) Ivoryton

Pillow Blocks
New Departure Div of General Motors (ball) Bristol

Pins
CEM Company ("Spirol") Danielson
Hartford Machine Screw Co Div of Standard Screw Co Hartford
Torrington Co The (Dowel & Taper) Torrington

Pin Up Lamps
Verplex Company The Essex

Pipe
American Brass Co The (brass and copper) Waterbury
Chase Brass & Copper Co (red brass and copper) Waterbury
Howard Co (cement well and chimney) New Haven

Pipe Fittings
Malleable Iron Fittings Co Branford

Pipe Plugs
Hartford Machine Screw Co Div of Standard Screw Co Hartford
Holo-Krome Screw Corporation The (countersunk) West Hartford

Pipe Plugs—Socketed
Hartford Machine Screw Co Div of Standard Screw Co Hartford
Holo-Krome Screw Corp The West Hartford

Pistols & Revolvers
Colt's Patent Fire Arms Mfg Co Inc Hartford

Plastic Bottles
Plax Corporation Bloomfield

Plastic Buttons
Frank Parisek Manufacturing Co The West Willington
Patent Button Co The Waterbury

Plastic Engraving
Conn-Craft Co. Waterbury
New England Engraving Co Div of Dura Plastics of New York Inc Westport
Salisbury Products Inc Lakeville

Plastic Extruders
Danielson Mfg Co The (nylon and other engineering plastics) Danielson
Jessall Plastics Div of The Electric Storage Battery Co Kensington

Plastic Fabrication
Conn-Craft Co. Waterbury
Dura Plastics of New York, Inc. Westport
Fabricon Corp Unionville
Salisbury Products Inc Lakeville

Plastic Film & Sheet Materials
Gilman Brothers Co The Gilman
Plax Corporation Bloomfield

Plastic Forming
Dura Plastics of New York, Inc. Westport

Plastic Lining Equipment
Comco Inc Div of Enthone Inc New Haven

Plastic Machinery
Black Rock Mfg Co The Bridgeport

Plastic Material
Dura Plastics of New York, Inc. (sheet, rod & tube) Westport

Plastic Molders
Plastic Molding Corporation Sandy Hook

Plastic Molding
Butterfield Inc T F Naugatuck
U S Plastic Molding Corporation Wallingford

Plastic Moulders
Conn Plastics Waterbury
Danielson Mfg Co The (nylon and other engineering plastics) Danielson
Engineered Plastics, Inc. Watertown
Scott & Sons Mfg Co Geo S Wallingford
Waterbury Companies Inc Waterbury
Watertown Mfg Co The Watertown

Plastic Pipe and Fittings
Comco Inc Div of Enthone Inc New Haven
Danielson Mfg Co The (nylon and other engineering plastics) Danielson

Plastic Printing Plates
Lockwood Sons Inc Wm H Hartford

Plastic Rod
Danielson Mfg Co The (nylon and other engineering plastics) Danielson

Plastic Tape
Danielson Mfg Co The (nylon and other engineering plastics) Danielson

Plastic Tubing
Danielson Mfg Co The (nylon and other engineering plastics) Danielson

Plastic Wire Coating Materials
Electronic Rubber Co Stamford

Plastics
Naugatuck Chemical Division United States Rubber Co Naugatuck (Advt.)

Plastics Machinery
Farrel-Birmingham Company Inc Ansonia

Plastics—Moulds & Dies
Crown Tool & Die Co Inc Bridgeport

Plasticrete Bloc
Plasticrete Corp Hamden

Platers
Acme Chromium Plating Co. New Haven
Christie Plating Co Groton
Chromium Process Company The (Chromium Plating only) Shelton
Patent Button Co The Waterbury
Water Plating Company Waterbury

Platers' Equipment
Apothecaries Hall Company Waterbury
Comco Inc Div of Enthone Inc New Haven
Lea Manufacturing Co The Waterbury
MacDermid Incorporated Waterbury

Platers Metal
Plume & Atwood Mfg Co The Thomaston

Plating
Christie Plating Co The (including lead plating) Groton
Giering Metal Finishing Inc Hamden
Superior Plating Co Bridgeport
Tec-Plate Inc Windsor Locks

Plating Processes and Supplies
Enthone Inc New Haven
Seymour Manufacturing Co. The Seymour
State Testing Laboratory Inc (plating analyses) Bridgeport

Plumbers' Brass Goods
Keeney Mfg Co The (special bends) Newington
McGuire Mfg. Co. Waterbury
Scovill Manufacturing Company Waterbury

Plumbing Specialties
Risdon Manufacturing Co John M Russell Div Naugatuck

Pole Line Hardware
Malleable Iron Fittings Co Branford

Police Equipment
The Smith-Worthington Saddery Co Hartford

Polishing
C & E Metal Finishing Co Hartford
Mirror Polishing & Buffing Co Waterbury

Postage Meters
Pitney Bowes Inc Stamford

Potentiometers—Electronic
Bristol Company The Waterbury

Precision Machine Tool Spindles
Whitnon Manufacturing Co (for milling, grinding, boring & drilling) Farmington

Precision Manufacturing
Hartford Machine Screw Co Div of Standard Screw Co Hartford
Torrington Co The Torrington

Precision Revolving Machinery
Whiton Manufacturing Co Farmington

Precision Sheet Metal Fabrication
Milford Fabricating Co Milford

Precision Springs & Wire Forms
Rowley Spring Co Inc The Bristol

Premium Specialties
Waterbury Companies Inc Waterbury

Preservatives—Wood, Rope, Fabric
Darworth Incorporated ("Cuprinol") ("Cellu-san") Simsbury

Pressboard
Case & Risley Press Paper Co (genuine) Oneco

Press Papers
Case Brothers Inc Manchester

Presses
Farrel-Birmingham Company Inc (Hydraulic) Ansonia

Presses—Power
Pneumatic Applications Co The (modernization of presses through conversion to Wichita Air Clutch operation) Simsbury
Waterbury Farrel Foundry & Machine Co The Waterbury

Pressure Vessels
Norwalk Tank Co Inc The (unfired to ASME Code Par U 69-70) South Norwalk
Whitlock Manufacturing Co The Hartford

Printing
Allied Printing Service Inc Manchester
Bussmann Press Inc New Haven
Case Lockwood & Brainard A Division of Connecticut Printers Inc Hartford
City Printing Co. The New Haven
Finlay Brothers Hartford
Heminway Corporation The Waterbury
Hildreth Press Bristol
Hunter Press Hartford
Lehman Brothers Inc New Haven
Taylor & Greenough Co The Wethersfield
T B Simonds Inc Hartford
A D Steinbach & Sons New Haven
The Walker-Rackliff Company New Haven

Printing Machinery
Banthin Engineering Co (automatic) Bridgeport

Printing Plates
Lockwood Sons Inc Wm H Hartford

Printing Rollers
Chambers-Storek Company Inc The (engraved) Norwich

Printing—Silk Screen
Ad-Craft Displays, Inc. Bloomfield

Production Control Equipment
Ripley Company Inc Middletown
Wassell Organization Inc Westport

Profilers
Pratt & Whitney Co Inc West Hartford

Propellers—Aircraft
Hamilton Standard Div United Aircraft Corp (propellers and other aircraft equipment) Windsor Locks

Protective Coatings
Harrison Company The A S (Waxes) South Norwalk

Publishers
O'Toole & Sons Inc The Stamford

Pumps
Sumo Pumps Inc (Deep-well electro-submersible) Stamford
Yale & Towne Mfg Co The Stamford

Pumps—Small Industrial
Eastern Industries Inc New Haven

Punches
Hoggson & Pettis Mfg Co The (ticket & cloth) New Haven

Putty Softeners—Electrical
Fletcher Terry Co The Forestville

Pyrometers
Bristol Co The (recording and controlling) Waterbury

Radiation—Finned Copper
Bush Manufacturing Co West Hartford
G & O Manufacturing Company The New Haven
Vulcan Radiator Co The (steel and copper) Hartford

Radiators—Engine Cooling
G & O Manufacturing Co New Haven

Ratchet Offset Screw Driver
Chapman Co J W Durham

Rayon Staple Fiber
Hartford Rayon Corp The Rocky Hill

Reamers
Atrax Company The (solid carbide) Newington
Pratt & Whitney Co Inc (All types) West Hartford
Pratt & Whitney Co Inc (all types carbide and HSS) West Hartford

Record Equipment
Wassell Organization Inc (filing equipment) Westport

Recorders
Bristol Co The (automatic controllers, temperature, pressure, flow, humidity) Waterbury

Reduction Gears
Farrel-Birmingham Company Inc Ansonia
Snow-Nabstedt Gear Corp The New Haven

Refractories
Howard Company New Haven
Mullite Works Refractories Div H K Porter Co Inc Shelton

Refrigeration
Dunham-Bush Inc West Hartford

Research & Development
Raymond Engineering Laboratories (Electro-Mechanical) Middletown
State Testing Laboratory Inc (chemical/physical testing) Bridgeport

Resistance Wire
C O Jeliff Mfg Co The (nickel chromium, copper nickel, iron chromium, aluminum) Southport
Kanathal Corporation The Stamford

Respirators
American Optical Company Safety Products Division Putnam

Retainers
Hartford Steel Ball Co The (bicycle & automotive) Hartford

Rigid Plastic Sheet Material
Gilman Brothers Company The Gilman

Riveting Machines
Grant Mfg & Machine Co The Bridgeport
Linley Brothers Company Bridgeport
Ripley Company Inc Middletown
H P Townsend Manufacturing Co The Elmwood

Rivets
Clark Brothers Bolt Co Milldale
Plume & Atwood Mfg Co The Thomaston
Raybestos Div of Raybestos-Manhattan Inc The (brass and aluminum tubular and solid copper) Bridgeport
Raybestos Div of Raybestos-Manhattan Inc The (iron) Bridgeport

Rods
American Brass Company The (copper, brass, bronze) Waterbury
Bridgeport Brass Company Bridgeport
Bristol Brass Corp The (brass and bronze) Bristol
Scovill Manufacturing Company (aluminum, brass, bronze, etc.) Waterbury

Rollers—Bituminous Paving
Gabb Special Products Div E Horton & Son Company Windsor Locks

Roller Skate Wheels
Raybestos Division of Raybestos-Manhattan Inc Bridgeport

Rolling Mills & Equipment
Farrel-Birmingham Company Inc Ansonia
Fenn Mfg Co The Newington
Precision Methods & Machines Inc Waterbury
Waterbury Farrel Foundry & Machine Co The Waterbury

Rolls
Farrel-Birmingham Company Inc (Chilled and Alloy Iron, Steel) Ansonia

Roofing
Lurie Inc A Bloomfield

Rotary Files
Atrax Company The (carbide) Newington

Routers
Atrax Company The (solid carbide) Newington

Rubber Chemicals
Naugatuck Chemical Division United States Rubber Co Naugatuck
Stamford Rubber Supply Co The ("Factice" Vulcanized Vegetable Oils) Stamford

Rubber Cutting Machinery
Black Rock Mfg Co The Bridgeport

Rubberized Fabrics
Duro-Gloss Rubber Co The New Haven

Rubber Footwear
Goodyear Rubber Co The Middletown

Rubber Gloves
Seamless Rubber Company The New Haven

Rubber—Handmade Specialties
Seamless Rubber Company The New Haven

Rubber Latex Compounds and Dispersions
Naugatuck Chemical Division United States Rubber Co (coating, impregnating and adhesive compounds) Naugatuck (Advt.)

Rubber Mill Machinery
Farrel-Birmingham Company Inc — Ansonia

Rubber—Molded Specialties
Airex Rubber Prod Corp — Portland
Bond Rubber Corporation — Derby
Seamless Rubber Company The — New Haven

Rubber Products
Airex Rubber Prod Corp — Portland

Rubber Printing Plates
ADS Inc Div CSW Plastic Types Inc — Hartford
Lockwood Sons Inc Wm H — Hartford

Rubber Products—Mechanical
American Felt Co — Glenville
Auburn Manufacturing Company The (washers, gaskets, molded parts) — Middletown
Seamless Rubber Company The — New Haven

Rubber—Reclaimed
Naugatuck Chemical Division United States Rubber Co — Naugatuck

Rubbers
Naugatuck Chemical Div U S Rubber Co (synthetic rubbers and latex) — Naugatuck

Rubbish Burners
John P Smith Co The — New Haven

Rust Preventives
Anderson Oil and Chemical Company, Inc — Portland
Enthone Inc — New Haven

Rust Removers
Enthone Inc — New Haven

Saddlery
The Smith-Worthington Saddlery Co — Hartford

Safety Belts
Russell Mfg Co — Middletown

Safety Clothing
American Optical Company Safety Products Division — Putnam

Safety Fuses
Ensign-Bickford Co The (mining & detonating) — Simsbury

Safety Gloves and Mittens
American Optical Company Safety Products Division — Putnam

Safety Goggles
American Optical Company Safety Products Division — Putnam

Saw Blades—Hack
Capewell Mfg Co The — Hartford
Thompson & Son Co The Henry G — New Haven

Saw Blades—Hack & Band
Capewell Manufacturing Company — Hartford

Saws, Band, Metal Cutting
Atlantic Saw Mfg Co — New Haven
Capewell Manufacturing Co The — Hartford
Thompson & Son Co The Henry G — New Haven

Saws—Hole
Capewell Manufacturing Co The — Hartford
Thompson & Son Co The Henry G — New Haven

Sawdust
Nielsen & Sons Inc John R (graded hardwood and softwood) — South Windsor

Scissors
Acme Shear Company The — Bridgeport

Screens
Hartford Wire Works Co The (Windows, Doors and Porches) — Hartford
Norlee Aluminum Prod Corp — Bloomfield

Screw Caps
Weimann Bros Mfg Co The (small for bottles) — Derby

Screw Machines
H P Townsend Mfg Company The — Elmwood

Screw Machine Products
Accurate Screw Products Inc (B & S Swiss & Davenports) — Southington
Apex Tool Co Inc The — Bridgeport
Auto Electric Screw Machine Co Inc — Bridgeport
Brown Manufacturing Co (up to 1⅛" capacity) — New Britain
Consolidated Industries — West Cheshire
Eastern Machine Screw Corp The — New Haven
Fairchild Screw Products Inc — Winsted
Franklin Screw Machine Co The (up to 1¼" capacity) — Hartford
Garthwait Mfg Co A E (up to and incl ½") — New Haven
Greist Mfg Co The (up to 1½" capacity) — New Haven
Hartford Machine Screw Co Div of Standard Screw Co (up to 5" capacity) — Hartford
Horberg Grinding Industries Inc (heat treated and ground type only) — Bridgeport

Screw Machine Products (Cont.)
Stanley Humason Inc — Forestville
Independent Screw Machine Products (up to and incl 1¼" capacity) — Hartford
Junior Screw Machine Products Inc — West Haven
Lowe Mfg Co The — Wethersfield
Main Screw Machine Products (davenport & automatics exclusively) — Waterbury
National Automatic Products Company The — Berlin
Nelson's Screw Machine Products — Plantsville
New Britain Machine Company The — New Britain
New Haven Screw Machine Prods Inc (up to 1½" capacity) — Milford
Newton Screw Machine Products Co — Plainville
Olson Brothers Company (up to ¾" capacity) — Plainville
Olson & Sons R P — Southington
Plume & Atwood Mfg Co The — Thomaston
Scovill Manufacturing Company — Waterbury
United Screw Machine Co — Thomaston
Waterbury Machine Tools & Products Co (Brown & Sharpe and Davenport) — Waterbury

Screw Machine Tools
American Cam Company Inc (Circular Form Tools) — Hartford
Pratt & Whitney Co Inc Reamers, Taps, Dies, Blades and Knurls) — West Hartford
Somma Tool Co (precision circular form tools) — Waterbury

Screws
Allen Manufacturing Company The — Hartford
American Screw Company — Willimantic
Atlantic Screw Works (wood) — Hartford
Bristol Company The (socket set and socket cap screws) — Waterbury
Clark Brothers Bolt Co — Milldale
Hartford Machine Screw Co Div of Standard Screw Co — Hartford
Holo-Krome Screw Corporation The (socket set and socket cap) — West Hartford
Scovill Manufacturing Company — Waterbury
Superior Manufacturing Co The — Winsted
Torrington Co The — Torrington

Screws—Socket
Allen Manufacturing Company The — Hartford
Bristol Co The — Waterbury
Hartford Machine Screw Co Div of Standard Screw Co — Hartford
Holo-Krome Screw Corp The — West Hartford

Sealing Tape Machines
Better Packages Inc ("Counterboy," "Tape-shooter," "Big Inch") — Shelton
Derby Sealers Inc (gummed and pressure-sensitive tapes) — Derby

Seals
Russell Mfg Co (for oven doors and fire bulkheads) — Middletown

Sewing Machines
Greist Mfg Co The (Sewing Machine attachments) — New Haven
Singer Manufacturing Company The (industrial) — Bridgeport

Sharpeners
Gorn Electric Co Inc (electric knife and scissors) — Stamford

Shaving Soaps
J B Williams Co The — Glastonbury

Shears
Acme Shear Co The (household) — Bridgeport

Sheet Metal Fabrications
Lurie Inc A — Bloomfield

Sheet Metal Products
American Brass Co The (brass and copper) — Waterbury
Merriam Mfg Co (security boxes, fitted tool boxes, tackle boxes, displays) — Durham
Parsons Co Inc W A (fabricators) — Durham
Plume & Atwood Mfg Co The — Thomaston
United Manufacturing Co Division of the W L Maxson Corp — Hamden

Sheet Metal Stampings
American Brass Company The — Waterbury
American Buckle Co The — West Haven
DooVal Tool & Mfg Inc The — Naugatuck
J H Sessions & Son — Bristol
Plume & Atwood Mfg Co The — Thomaston
Scovill Manufacturing Company (aluminum, brass, bronze, copper, nickel silver, steel and other metals and alloys) — Waterbury

Sheet Steel
Dolan Steel Company Inc — Bridgeport

Shell Cores
Victors Brass Foundry Inc — Guilford

Shell Molding
Victors Brass Foundry Inc — Guilford

Shells
Scovill Manufacturing Company (aluminum, brass, bronze, copper, nickel silver—drawn, stamped—electric socket, screw) — Waterbury
Wolcott Tool and Manufacturing Company Inc — Waterbury

Showcase Lighting Equipment
Wiremold Company The — Hartford

Signals
H C Cook Co The (for card files) — Ansonia

Signs
Ad-Craft Displays, Inc. (all types, quantity only) — Bloomfield
Conn-Craft Co. (3 Dimensional, Plastic, Metal & Wood) — Waterbury

Silk Screen Process Printing
Ad-Craft Displays Inc — Bloomfield
Norton Co R H — New Haven
Sirocco Screen prints — New Haven
Stifel & Kufta Inc — New Britain

Silk Screening on Metal
Ad-Craft Displays Inc — Bloomfield
Merriam Mfg Co (Displays and Specialties, to order) — Durham

Simulators
Reflectone Corporation The — Stamford

Sintered Metal Products
American Sinterings Div of Engineered Plastics Inc (Powder Metal Parts) — Watertown
Raybestos Division of Raybestos-Manhattan Inc — Bridgeport

Sizing and Finishing Compounds
American Cyanamid Company — Waterbury

Slide Fasteners
G E Prentice Mfg Co The — Kensington
North & Judd Manufacturing Co — New Britain
Scovill Manufacturing Company (GRIPPER zippers) — Waterbury

Smoke Stacks
Bigelow Company The (steel) — New Haven
Norwalk Tank Co The — South Norwalk

Snap Fasteners
Scovill Manufacturing Company (GRIPPER snap fasteners) — Waterbury

Soap
J B Williams Co The (industrial soaps, toilet soaps, shaving soaps) — Glastonbury

Sound Equipment
Vinco Electronics Corporation — New Haven

Special Machinery
Banthin Engineering Company (complete and/or parts) — Bridgeport
Black Rock Mfg Co The — Bridgeport
Boesch Mfg Co Inc — Danbury
Farrel-Birmingham Company Inc — Ansonia
Federal Machine & Tool Co — Bristol
Fenn Mfg Co The — Newington
Hartford Special Machinery Co The — Hartford
H P Townsend Mfg Company The — Elmwood
National Sheradizing & Machine Co (mandrels & stock shells for rubber industry) — Hartford
Swan Tool & Machine Co The — Hartford
Tucker Machine Co — New Haven

Special Parts
Fenn Mfg Co The — Newington
Greist Mfg Co The (small machines, especially precision stampings) — New Haven
J H Sessions & Son — Bristol
Torrington Co The — Torrington

Spinnings
Gray Manufacturing Company The — Hartford

Spline Milling Machines
Townsend Mfg Co The H P — Elmwood

Spotwelding
Spotwelders Inc (aluminum, steel, magnesium, titanium & alloys) — Stratford

Spray Painting Equipment and Supplies
Lea Manufacturing Co The — Waterbury

Spring Coiling Machines
Torrington Manufacturing Co The — Torrington

Spring Presses
Townsend Mfg Co The H P — Elmwood

Spring Units
Owen Silent Spring Division American Chain & Cable Company Inc — Bridgeport

Spring Washers
Barnes Co The Wallace Div Associated Spring Corp — Bristol

Springs
Central Spring Co (Torsion and Double Torsion) — Terryville

Springs—Coil & Flat
Barnes Co The Wallace Div Associated Spring Corp — Bristol
Barrett Co William L — Bristol
Bristol Spring Manufacturing Co — Plainville
Foursome Manufacturing Co — Bristol
Newcomb Spring Corp The — Southington
New England Spring Mfg Co — Unionville
Peck Spring Co The — Plainville
Stanley Humason Inc — Forestville

Springs—Flat
Atlantic Precision Spring Co — Forestville
Barnes Co The Wallace Div Associated Spring Corp — Bristol
Bristol Spring Manufacturing Co — Plainville
Foursome Manufacturing Co — Bristol
Stanley Humason Inc — Forestville
New England Spring Mfg. Co. — Unionville
Peck Spring Co — Plainville

(Advt.)

Springs—Wire
Banner Spring Corporation Hartford
Barnes Co The Wallace Div Associated Spring Corp Bristol
Bernston Co J W Plainville
Bristol Spring Manufacturing Co Plainville
Colonial Spring Corporation The Hartford
Connecticut Spring Corporation The (compression, extension, torsion) Hartford
Foursome Manufacturing Co Bristol
Stanley Humason Inc Forestville
Newcomb Spring Corp The Southington
New England Spring Mfg. Co. Unionville
Peck Spring Co Plainville
D R Templeman Co (coil and torsion) Plainville

Springs, Wire & Flat
Peck Spring Co Plainville

Sprinklers
Scovill Manufacturing Company (GREEN SPOT) Waterbury

Stamped Metal Products
American Brass Company The Waterbury

Stampings
DooVal Tool & Mfg Inc The Naugatuck
Foursome Manufacturing Co Bristol
Plume & Atwood Mfg Co The (small) Thomaston
Scovill Manufacturing Company (aluminum, brass, bronze, copper, nickel silver, steel and other metals and alloys—automotive, electrical, radio, etc.—deep drawn, enameled) Waterbury
Stanley Pressed Metal New Britain

Stampings—Small
Acme Shear Co The Bridgeport
Barnes Co The Wallace Div Associated Spring Corp Bristol
Barret Co William L Bristol
Bristol Spring Manufacturing Co Plainville
Greist Manufacturing Co The New Haven
Stanley Humason Inc Forestville
Wire Form Inc Milldale

Stamps
Hoggson & Pettis Mfg Co The (steel) New Haven
Parker-Hartford Corporation (steel) Hartford

Stationery Specialties
American Brass Company The Waterbury

Steel Castings
Hartford Electric Steel Corp The (carbon, low alloy and stainless steel castings) Hartford
Malleable Iron Fittings Co Branford
Nutmeg Crucible Steel Co Branford

Steel—Cold Rolled Spring
Barnes Co The Wallace Div Associated Spring Corp Bristol
Detroit Steel Corporation Hamden

Steel—Cold Rolled Stainless
Seymour Manufacturing Co. The Seymour
Ulbrich Stainless Steels Wallingford
Wallingford Steel Company Wallingford

Steel—Cold Rolled Strip
Detroit Steel Corporation Hamden
Stanley Works The New Britain

Steel—Cold Rolled Strip and Sheets
Detroit Steel Corporation New Haven
Wallingford Steel Company Wallingford

Steel Goods
Merriam Mfg Co (sheets products to order) Durham

Steel—Ground Flat Stock
Thompson & Son Co The Henry G New Haven

Steel Rolling Rules
Waterbury Lock & Specialty Co The Milford

Steel Stamps
Cooney Engraving Co Branford

Steel Strapping
Stanley Works The New Britain

Stereotypes
New Haven Electrotype Div Electrographic Corp New Haven

Stop Clocks, Electric
H C Thompson Clock Co the Bristol

Storage Batteries
R A E Storage Battery Mfg Co Glastonbury

Straps, Leather
Auburn Manufacturing Company The (textile, industrial, skate, carriage) Middletown

Strip Steel
Dolan Steel Company Inc Bridgeport

Structural Mouldings
Leed Co The H A Hamden

Studio Couches
Waterbury Mattress Co Waterbury

Super Refractories
Mullite Works Refractories Div H K Porter Co Inc Shelton

Surface Metal Raceway & Fittings
Wiremold Company The Hartford

Surgical Dressings
Acme Cotton Products Co Inc East Killingly
Seamless Rubber Company The New Haven

Surgical Rubber Goods
Seamless Rubber Company The New Haven

Swaging Machinery
Fenn Mfg Co The Newington
Torrington Co The Torrington

Sweeping Compounds
Nielsen & Sons Inc John R South Windsor

Switchboards Wire and Cables
Rockbestos Products Corp (asbestos insulated) New Haven

Switches—Electric
General Electric Company Bridgeport

Synthetic Fabrics
American Felt Co Glenville

Tabulating Equipment—Manual
Denominator Company Inc Woodbury
Veeder-Root Incorporated Hartford

Tanks
Acme Welding Div United Tool & Die Co West Hartford
Bigelow Company The (steel) New Haven
Comco Inc Div of Enthone Inc (steel, alloy and lined) New Haven
Connecticut Welders Inc (steel, alloy & lined) Wallingford
King Co Alfred B (steel, alloy and lined) North Haven
Norwalk Tank Co The South Norwalk
Rolock Inc (Alloy) Fairfield
Storts Welding Company (steel and alloy) Meriden

Tap Extractors
Walton Company The West Hartford

Tape
Russell Mfg Co (Glass Electrical Insulating Tapes, Glass Fabrics for Plastic Moulding) Middletown

Tapes—Industrial Pressure Sensitive
Seamless Rubber Company The New Haven

Tape Machines
Better Packages Inc (Manual and electric models for case taping) Shelton
Derby Sealers Inc (manual and electric models) Derby

Taps
Hanson-Whitney Company The Hartford
Pratt & Whitney Co Inc West Hartford

Tarred Lines
Brownell & Co Inc Moodus

Telemetering Instruments
Bristol Co The Waterbury

Television—Radio
Junior Screw Machine Products Inc West Haven

Testers—Insulation
McNeal J D New Haven

Testers—Insulation Wire & Cable
Davis Electric Company Wallingford

Testers—Nondestructive, Ultrasonic
Sperry Products Inc Danbury

Testing
State Testing Laboratory Inc (environmental, X-ray, tensile, bearings) Bridgeport

Textile Printing Gums
Polymer Industries Inc Springdale

Textile Processors
Amerbelle Corporation Rockville

Thermometers
Bristol Co The (recording and automatic control) Waterbury
Manning Maxwell & Moore Inc Stratford

Thin Gauge Metals
Plume & Atwood Mfg Co The Thomaston
Thinsheet Metals Co The (plain or tinned in rolls) Waterbury

Thread
American Thread Co The Willimantic
Belding Heminway Corticelli Putnam

Thread Chasers
Geometric Tool Division, Greenfield Tap & Die Corp New Haven

Thread Gages
Hanson-Whitney Company The Hartford
Pratt & Whitney Co Inc West Hartford

Thread Milling Machines
Hanson-Whitney Company The Hartford
Pratt & Whitney Co Inc West Hartford

Thread Rolling
Bland Burner Co The Thread Products Div Hartford

Thread Rolling Machinery
Hartford Special Machinery Co The Hartford
Mettler Machine Tool Inc New Haven

Threading Machines
Grant Mfg & Machine Co The (double end automatic) Bridgeport

Timers, Interval
A W Haydon Co The Waterbury
H C Thompson Clock Co The Bristol
Cramer Controls Corporation The Centerbrook
Rhodes Inc M H Hartford

Timing Devices
B & N Tool & Engineering Co (development and model work) Thomaston
Cramer Controls Corporation The Centebrook
A W Haydon Co The Waterbury
Lux Clock Manufacturing Company Waterbury
Rhodes Inc MH Hartford
United States Time Corporation The Waterbury

Timing Devices & Time Switches
A W Haydon Co The Waterbury
Lux Clock Manufacturing Company Waterbury
M H Rhodes Inc Hartford

Tinning
Thinsheet Metals Co The (non-ferrous metals in rolls) Waterbury
Wilcox-Crittenden Div North & Judd Mfg Co Middletown

Tires
Armstrong Rubber Company The West Haven

Tokens
Scovill Manufacturing Company (bus, street car and subway fare) Waterbury

Tool Bits
Thompson & Son Co The Henry G New Haven

Tool Chests
Vanderman Manufacturing Co The Willimantic

Tool Hardening
Commercial Metal Treating Co Bridgeport

Tools
B & N Tool & Engineering Co (dies, jigs, fixtures, sub-press and progressive) Thomaston
Hoggson & Pettis Mfg Co The (rubber workers) 141 Brewery St New Haven

Tools & Dies
Metropolitan Tool & Die Hartford
Moore Special Tool Co Bridgeport
Swan Tool & Machine Co The Hartford

Tools, Dies & Fixtures
Greist Mfg Co The New Haven

Tools, Dies, Jigs & Fixtures
Lyons Tool & Die (modelwork, jig boring) Meriden
Otterbein Co J A Middletown
Telke Tool & Die Mfg Co New Britain

Tools, Fixtures, Gauges
Fredericks Tool Co J F West Hartford

Toroidal Winding Machines
Boesch Mfg Co Inc Danbury

Totalizers
Reflectone Corporation The Stamford

Toys
Geo S Scott Mfg Co The Wallingford
Gilbert Co The A C New Haven
N N Hill Brass Co The East Hampton
Waterbury Companies Inc Waterbury

Transformers
Monarch Electric Co (Allis Chalmers) New Britain

Trucks—Commercial
Metropolitan Body Company (International Harvester Truck chassis and "Metro" bodies) Bridgeport

Truck—Lift
Excelsior Hardware Co The Stamford

Trucks—Skid Platforms
Excelsior Hardware Co The (lift) Stamford

Tube Clips
H C Cook Co The (for collapsible tubes) Ansonia
Weimann Bros Mfg Co The (for collapsible tubes) Derby

Tube Fittings
Scovill Manufacturing Company (UNIFLARE flared tube and LOXIT compression tube) Waterbury

Tubers
Standard Machinery and Davis-Standard Divisions of Franklin Research Corp Mystic (Advt.)

Tubes—Collapsible Metal
Sheffield Tube Corp The — New London

Tubing
American Brass Co The (brass and copper) — Waterbury
G & O Manufacturing Co (finned) — New Haven
Scovill Manufacturing Company (Brass and Copper) — Waterbury
Wallingford Steel Co The (stainless and super metals) — Wallingford

Tubing—Flexible Metallic
American Brass Co Metal Hose Branch — Waterbury

Tubing—Heat Exchanger
American Brass Company The — Waterbury
Scovill Manufacturing Company — Waterbury

Tumbling Barrels and Accessories
Nielsen & Sons Inc John R — South Windsor

Tumbling Equipment and Supplies
Esbec Barrel Finishing Corp — Byram

Tumbling Service
Esbec Barrel Finishing Corp — Meriden

Turntables
Macton Machinery Company Inc (industrial & display) — Stamford

Typewriters
Royal McBee Corp — Hartford
Underwood Corporation — Hartford

Typewriters—Portable
Royal McBee Corp — Hartford
Underwood Corporation — Hartford

Typewriter Ribbons and Supplies
Royal McBee Corp — Hartford
Underwood Corporation — Hartford and Bridgeport

Ultrasonic Processing Equipment
General Ultrasonics Co The — Hartford

Underclearer Rolls
Sonoco Products Co (Climax-Lowell Div) — Mystic

V-Belt Drives
Monarch Electric Co (Allis Chalmers) — New Britain

Vacuum Bottles and Containers
American Thermos Products Co — Norwich

Vacuum Cleaners
Electrolux Corporation — Old Greenwich
Spencer Turbine Co The — Hartford

Valves—Aircraft
Bridgeport Thermostat Div Robertshaw-Fulton Controls Co — Milford

Valves—Relief & Control
Beaton & Caldwell Mfg Co — New Britain

Valves—Safety & Relief
Manning Maxwell & Moore Inc — Stratford

Vanity Boxes
Bridgeport Metal Goods Mfg Co — Bridgeport
Plume & Atwood Manufacturing Co — Thomaston
Scovill Manufacturing Company — Waterbury

Varnishes
Staminite Corp The — New Haven

Velvets
American Velvet Co (owned and operated by A Wimpfheimer & Bros Inc) — Stonington
Leiss Velvet Mfg Co Inc The — Willimantic

Venetian Blinds
Findell Manufacturing Company — Manchester
Jennings Company The S Barry — New Haven

Ventilating Systems
Colonial Blower Company — Plainville

Vertical Shapers
Pratt & Whitney Co Inc — West Hartford

Vibrators—Pneumatic
Branford Co The (industrial) — New Haven

Vinyl Extrusion & Moulding Compounds
Electronic Rubber Co — Stamford

Vises
Fenn Manufacturing Company The (Quick-Action Vises) — Newington
Vanderman Manufacturing Co The (Combination Bench Pipe) — Willimantic

Wall Paper
Stamford Wall Paper Co Inc — Stamford

Washers
American Felt Co (felt) — Glenville
Auburn Manufacturing Company The (all materials) — Middletown
Clark Brothers Bolt Co — Milldale
Fabricon Corp — Unionville
Plume & Atwood Mfg Co The (brass & copper) — Thomaston
Saling Manufacturer Company (made to order) — Unionville

Washers—Felt
American Felt Co — Glenville
Chas W House & Sons Inc (Mills & Cutting Plant) — Unionville

Watches
E Ingraham Co The — Bristol
United States Time Corporation The — Waterbury

Water Deionizers
Penfield Mfg Co — Meriden

Water Heaters
Whitlock Manufacturing Co The (instantaneous & storage) — Hartford

Water Heaters— Electric
Bauer & Company Inc — Hartford

Water Heaters—Gas or Kerosene
Holyoke Heater Corp of Conn Inc — Hartford

Waxes
Harrison Company The A S (and other protective coatings) — South Norwalk

Waxes—Floor
Fuller Brush Co The — Hartford

Webbing
Russell Mfg Co (Webbing for Safety Seat Belts—all types of webbing) — Middletown

Wedges
Saling Manufacturing Company (hammer & axe) — Unionville

Welded Products
Acme Welding Div United Tool & Die Co — West Hartford

Welding
Aircraft Welding & Mfg Co Inc (aluminum, stainless steel, magnesium) — Hartford
Connecticut Welders Inc (fabrication & repairs) — Wallingford
Farrel-Birmingham Company Inc — Ansonia
Industrial Welding Company (Equipment Manufacturers—Steel Fabricators) — Hartford
King Co Alfred B — North Haven

Welding—Lead
Connecticut Welders Inc (tanks & coils) — Wallingford
King Co Alfred B — North Haven
Lead Products, Inc. (tanks and fabrication) — Manchester
Storts Welding Company (tanks and fabrication) — Meriden

Welding—Lead Bricks
Lead Products, Inc. — Manchester

Welding Rods
American Brass Company The — Waterbury
Bridgeport Brass Company — Bridgeport
Bristol Brass Co The (brass & bronze) — Bristol

Welding Solder
Lead Products, Inc. (wire, bar and cakes and babbits) — Manchester

Wells
Church Co The Stephens B — Seymour

Wicks
American Felt Co — Glenville
Auburn Manufacturing Company The (felt, asbestos) — Middletown
Holyoke Heater Corp of Conn Inc — Hartford

Wiffle Ball
Wiffle Ball Inc The — New Haven

Window & Door Guards
Hartford Wire Works Co The — Hartford
Smith Co The John P — New Haven

Wire
American Brass Company The — Waterbury
Atlantic Wire Co The (steel) — Branford
Bartlett Hair Spring Wire Co The — North Haven
Bristol Brass Corp The (brass & bronze) — Bristol
Driscoll Wire Co The (steel) — Shelton
Hudson Wire Co Winsted Div (insulated & enameled magnet) — Winsted
Platt Bros & Co The (zinc and zinc alloy wires) — Waterbury
Plume & Atwood Mfg Co The (brass, bronze, nickel silver) — Thomaston
Scovill Manufacturing Company (Brass, Bronze and Nickel Silver) — Waterbury

Wire and Cable
Continental Wire Corp (for industrial and military applications) — Wallingford
General Electric Company (for residential, commercial and industrial applications) — Bridgeport
Rockbestos Products Corporation (all asbestos, mining, shipboard and appliance applications) — New Haven

(Advt.)

Wire Arches & Trellises
Hartford Wire Works Co The — Hartford
John P Smith Co The — New Haven

Wire Baskets
Wiretex Mfg Inc (Industrial, for acid, heat, treating and degreasing) — Bridgeport

Wire Cloth
Hartford Wire Works Co The — Hartford
C O Jeliff Mfg Co The (all metal, all meshes) — Southport
Pequot Wire Cloth Co Inc — Norwalk
Rolock Inc (Alloy) — Fairfield
Smith Co The John P — New Haven

Wire Dipping Baskets
Hartford Wire Works Co The — Hartford
John P Smith Co The — New Haven

Wire Drawing Dies
Waterbury Wire Die Co The — Waterbury

Wire Forming Machinery
Nilson Machine Company The A H — Shelton
Torrington Manufacturing Company The — Torrington

Wire Formings
Master Engineering Company — West Cheshire
North & Judd Manufacturing Co — New Britain
Peck Spring Co — Plainville
Turner & Seymour Manufacturing Co The — Torrington
Verplex Company The — Essex

Wire Forms
Atlantic Precision Spring Co — Forestville
Banner Spring Corporation — Hartford
Barnes Co The Wallace Div Associated Spring Corp — Bristol
Bristol Spring Manufacturing Co — Plainville
Central Spring Co (short run orders) — Terryville
Colonial Spring Corporation The — Hartford
Connecticut Spring Corporation The — Hartford
Foursome Manufacturing Co — Bristol
Gemco Manufacturing Co Inc — Southington
Stanley Humason Inc — Forestville
New England Spring Mfg Co — Unionville
Peck Spring Co — Plainville
Templeman Co D R — Plainville
Terryville Manufacturing Co — Terryville
Wire Form Inc — Milldale

Wire Goods
American Buckle Co The (overall trimmings) — West Haven
Patent Button Co The — Waterbury
Scovill Manufacturing Company (To Order) — Waterbury

Wire Partitions
Hartford Wire Works Co The — Hartford
John P Smith Co The — New Haven

Wire Products
Stanley Humason Inc — Forestville
Peck Spring Co — Plainville
Plume & Atwood Mfg Co The (to order) — Thomaston

Wire Reels
Mettler Machine Tool Inc — New Haven
Nilson Machine Company The A H — Shelton

Wire Rings
American Buckle Co The (pan handles and tinners' trimmings) — West Haven
Stanley Humason Inc — Forestville
Peck Spring Co — Plainville
Templeman Co D R — Plainville

Wire—Specialties
Andrew B Hendryx Co The — New Haven

Wire Straightening and Cutting Machinery
Mettler Machine Tool Inc — New Haven

Wiring Devices
Harvey Hubbell Inc — Bridgeport

Wood Scrapers
Fletcher-Terry Co The — Forestville

Woodwork
C H Dresser & Sons Inc (Mfg all kinds of woodwork) — Hartford
Hartford Builders Finish Co — Hartford

Woven Felts—Wool
Chas W House & Sons Inc (Mills & Cutting Plant) — Unionville

Yarns
Aldon Spinning Mills Corporation The (fine-woolen and specialty) — Talcottville
Ensign-Bickford Co The (jute-carpet) — Simsbury
Hartford Spinning Incorporated (Woolen, knitting and weaving yarns) — Unionville

Zinc
Platt Bros & Co The (ribbon, strip and wire) P O Box 1030 — Waterbury

Zinc Castings
Newton-New Haven Co Inc — West Haven

Zinc Die Castings
Mt Vernon Die Casting Corporation — Stamford
Stewart Die Casting Div Stewart-Warner Corp — Bridgeport

COLONIAL

Industrial Ventilating and Dust Collecting Equipment

BELT DRIVE PROPELLER FAN

DIRECT DRIVE PROPELLER FAN

MATERIAL HANDLING FAN

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Two-Way Fire Protection

(Continued from page 15)

with fixed temperature. These are rated at 136° and 190°. In the normally well-trafficked areas, manual pullboxes of the "breakglass, pull down," variety are used.

Following schematic wiring diagrams furnished by Edwards, Burndy installed the entire network. Fire stations were wired in two separate zones, one corresponding to the library and the second to the warehouse and two office buildings. Zones were composed of both automatic and manual fire stations. The two districts were then connected to associated signal lamps on a control panel located in the executive office building.

To integrate sprinklers into the AMVAD system, all that had to be done was install flow switches in the main sprinkler valves of each of the four remaining buildings. These were wired into the system just as detectors were. The switches are normally in open position. If a sprinkler should be set off by fire, or if a defective sprinkler head goes off accidentally, the resulting flow of water closes the switch, sending a signal to an associated lamp on the control panel, which causes all alarm signals to ring.

Under normal conditions, the six zone lamps on the control panel, two wired for fire stations and four wired for sprinklers, are lighted. Upon operation of any automatic fire detector, pressure switch or pullbox, the associated zone lamp goes out and a common alarm lamp lights. Alarm bells then sound continuously until the system is reset by pushing a button located on the panel. When a fire alert sounds, it is simultaneously answered by plant engineers, maintenance men, a volunteer group of fire fighters, and by the municipal fire department.

In the event of power interruption, a trouble bell sounds and the AMVAD system switches automatically to standby, trickle charged batteries. If complete power failure occurs, the standby batteries will maintain the system for up to 24 hours. Burndy's AMVAD is tested by plant engineers every two or three weeks to insure that components and wiring are in perfect operating order. Routine service is carried out by the company's electrical maintenance department.

According to chief engineer Scheinbeim: "With AMVAD tied into our sprinklers, our fire protection problems are solved. As a matter of fact, we have doubled protection while cutting our security force in half. Incidentally, AMVAD is so effective that tentative plans now call for installation of the same system in other Burndy plants."

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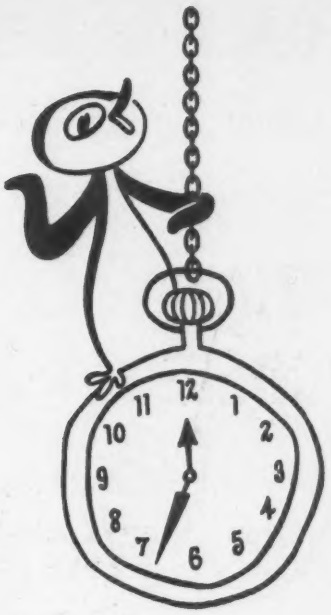
7 MINUTE SAVING PAYS FOR AIR CONDITIONING



Yes, only seven minutes a day saved per employee (an increase of only 1.5% in work production per year) will more than pay for an air conditioning system. That's the finding reported in a recent comprehensive government survey.*

The tests showed that the actual savings are much greater than this. Rigid controls were set up to give the study greatest validity. Two offices were prepared having identical conditions, except for air conditioning. Employees who corresponded in number, average age and distribution between men and women were chosen to work in the offices.

Here are some of the facts the survey uncovered that are of interest to you and your business:

- The average employee output under air conditioning was more than 9% greater.
- 2.5% less absenteeism was experienced.
- 0.9% decrease in errors resulted.
- A measurable decrease in employees' living expenses (savings in cleaning bills, hairdos, make-up, etc.) was recorded.
- Air Conditioning made an important contribution to employee morale.

In its conclusion, the report states, "It is safe to assume that . . . the increase in productivity will be more than enough to pay for air conditioning through savings in employee salaries."

Call the Industrial Department of your electric utility and ask to have a free survey made of your office and production areas' air conditioning requirements. Learn first hand how just a few minutes saved a day will pay for the installation and operation of air conditioning.

*Source: Public Buildings Service of the U. S. General Services Administration's study, "Influence of Air Conditioning on Work Production."

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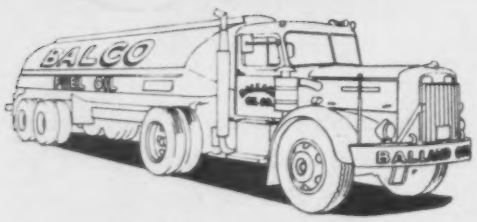

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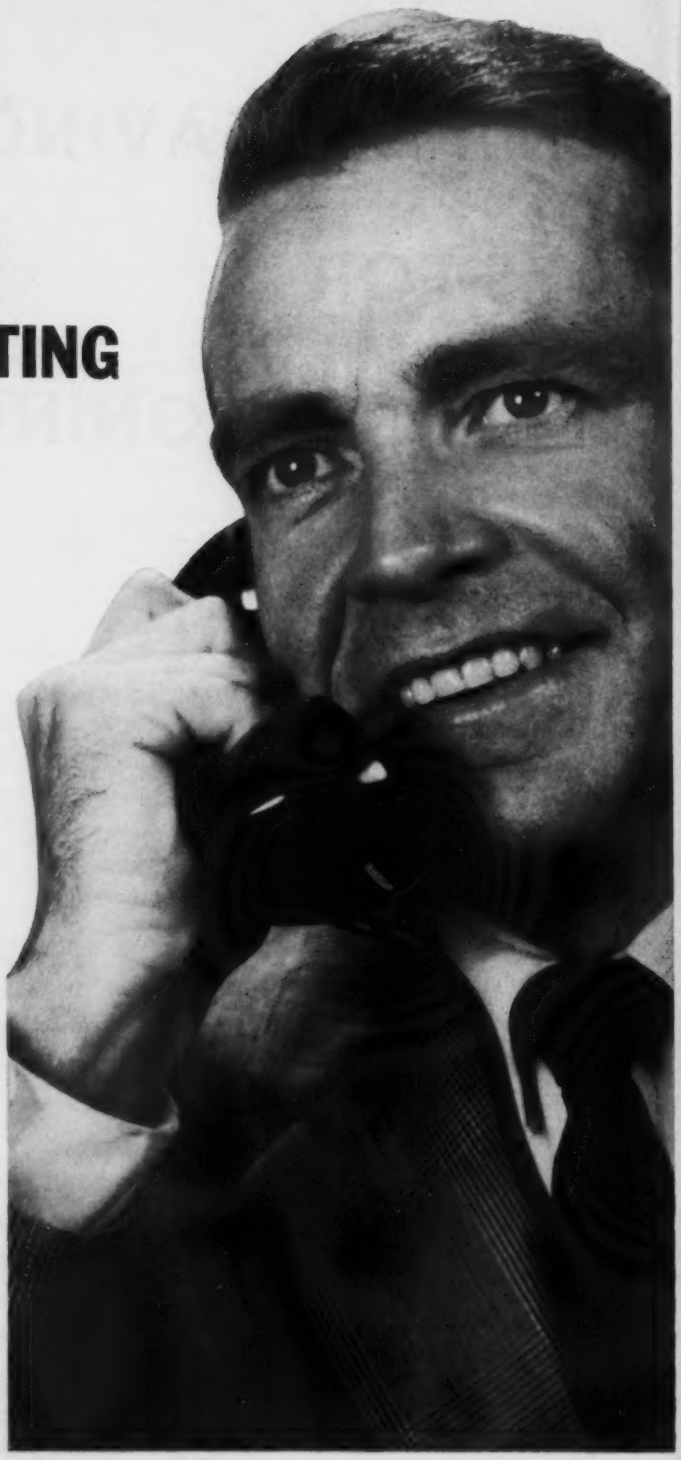

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